GLAUBER'S

WORKS

1689

24,798/D/2

N. VII
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PA-3834

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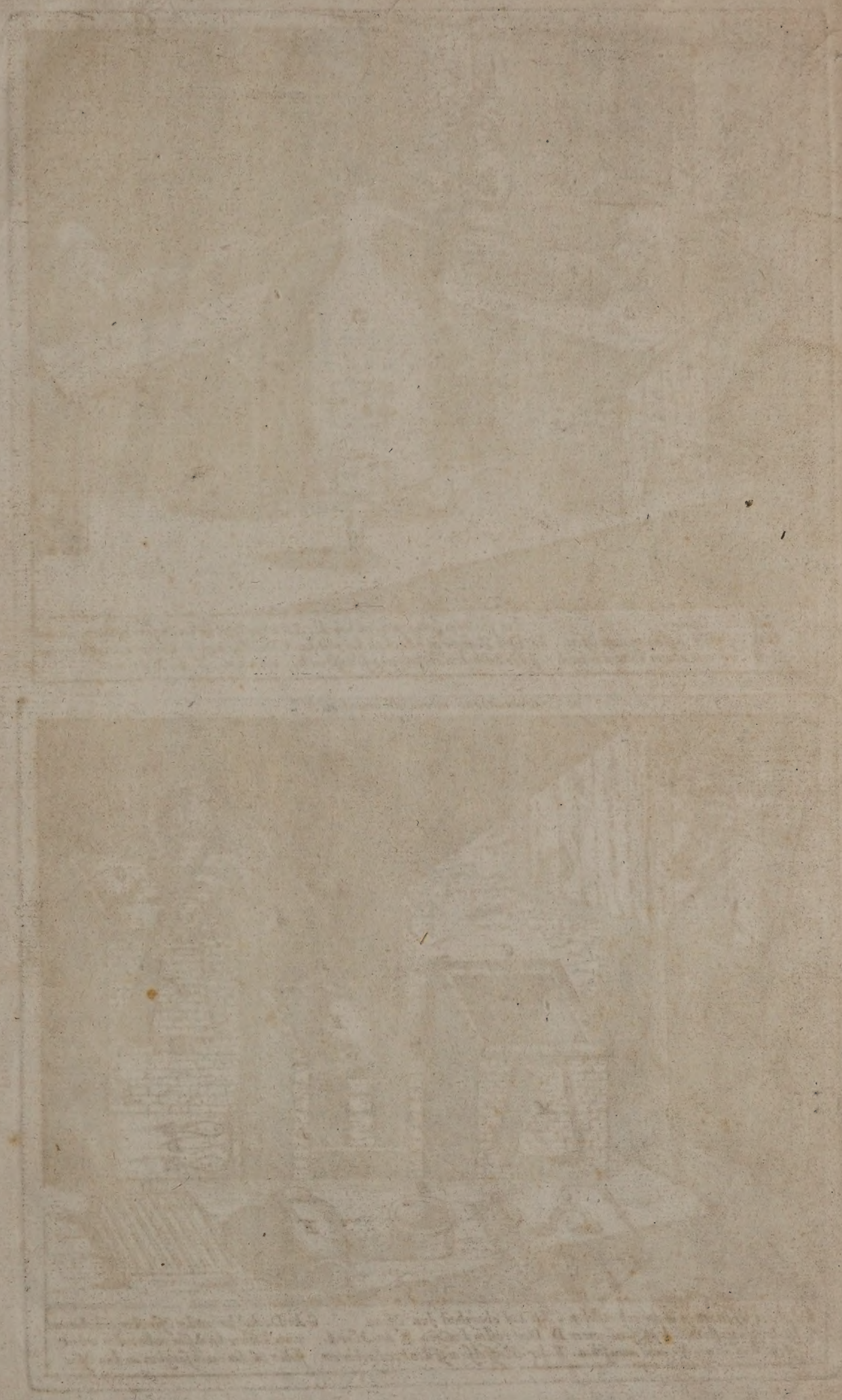

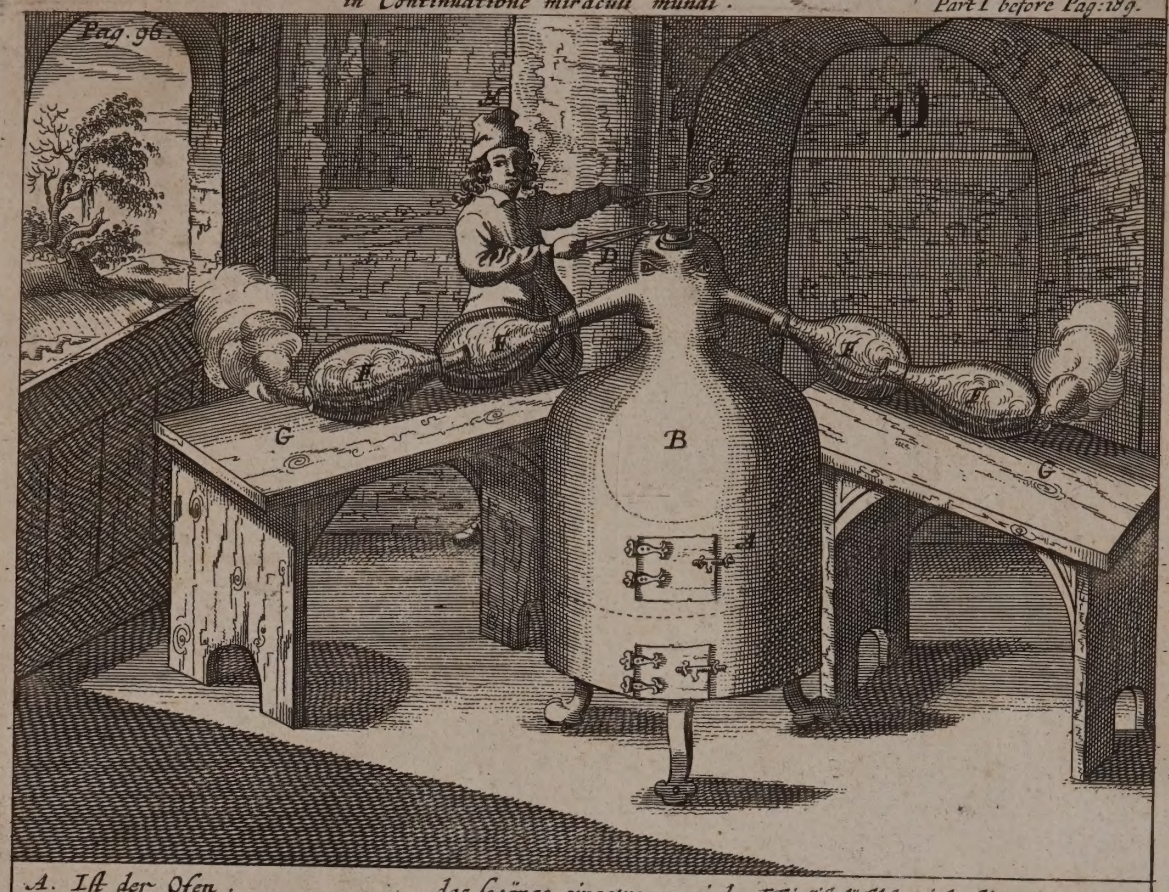

A. Ist der Ofen.
B. Das distillier gefäs in dem Ofen.
C. Das loch mit einem faltz dardurch das swänge eingetragen wird.
D. Die Zange mit deckel darmit das gefäs nach dem eintragen geschlosse wirdt.
E. Ein Eisen löffel darmit der schwan eingetragen wirdt enten ligen.
F. die recipienten.
G. Die banck darauf die recipi
H. der Laborant.

A. Ist der Ofen wie er in der arbeit stehet.
B. Ist der Unterstetheil des Ofens wie er offen ohne die vorder wand anzu sehen.
C. Ist das obertheil des Ofens
D. Der rost in dem Ofen.
E. der Herd.
F. der Mussel so auff den herd gehöret.
G. der Deckel darmit der Ofen oben gedecket wirdt wann kohlen darin sein und in voller arbeit stehet.
H. das rauch fänglein an dem Ofen.

THE

WORKS

OF THE

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John Rudolph Glauber:

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IN

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ALSO,

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Translated into *English*, and Published for Publick Good by the *Labour*, *Care*, and *Charge*, of CHRISTOPHER PACKE, *Philo-chymico-Medicus*.

LONDON,
Printed by *Thomas Milbourn*, for the Author, and are to be sold at his House next Door to the *Gun* in *Little-Moorfields*; by *D. Newman* at the *King's-Arms* in the *Poultry*, and *W. Cooper* at the *Pellican* in *Little Britain*. MDCLXXXIX.

Opera Johannis Rudolphi Glauberi

Imprimantur,

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TO THE

Honoured, and Truly Learned,

Edmond Dickenſon, M. D.

Phyſician to the KING'S Perſon and Family.

THE Art of Chymiſtry, (*Honoured Sir*) although in its Speculations moſt Noble and Delectable to a Philoſophick Mind, and in its Practice highly Inſervient, and Beneficial to Mankind; yet hath it not eſcaped the Obloquies, and falſe Imputations of Detractors, and Calumniators, who either through Ignorance, Idleneſs, or Envy (or all of them conjoin'd) have made a falſe Repreſentation of this moſt Noble Art to the World, and endeavoured to ſet Mankind at the greateſt diſtance from that which is its higheſt intereſt to court. For which cauſe, ſuch Writings as Promulge, and offer at the advancing of the *Chymical Art*, ſtand in need of ſuch a Patron as is able to defend them againſt all the Cavils of Pride, Envy, and Ignorance.

And if the Exquiſite Parts, and Profound Learning in the more Abſtruſe Philoſophy, together with a Long, and Indefatigable Scrutiny and Labour in the Chymical Art, accompanied with a happy Practice in the Honourable Faculty of Phyſick, be fit Accompliſhments to Entitle one a **Mecænas** of this Art; then are thoſe Excellencies all met and Concentred in your ſelf, as is evident to the whole World by your Curious and Learned Epiſtle to **Mundanus**, and his Anſwer to it, which anſwer will be a Laſting Teſtimony of your great Worth and Merit.

For certainly, Sir, it is no ſmall evidence of your Worth and Abilities in the *Pyrotechnick Art*, that a Philoſopher who had been more than forty years an *Adept*, in all that time ſhould not find three Perſons, beſides your ſelf, whom he thought worthy to make certain of the truth of what they ſought, and aſpired after; and yet gave you an Ocular Satisfaction and Certitude of that which Thouſands have deſired to ſee, but could not: And further ſeriouſly profeſſing, that if he had had the ſame liberty from his Maſter, that ſome *Adepts* enjoy, that he would have revealed to you the whole Secret.

Theſe things have induced me humbly to offer this Book to your Patronage, not doubting but under your Name and Protection, it will be able to overcome many Difficulties, and obtain a free paſſage in this our *Engliſh* World, to the benefit and advantage of many well-diſpoſed perſons, who ſeek after Honeſt, Profitable, and Commendable Arts, which I am fully perſwaded was the chief end of the Author in Writing; and I am ſure is mine in Tranſlating his Works. You are throughly acquainted with *Glauber's Writings*, you know his Menſtruums, and his Medicines, and are able to atteſt the truth of what others may account falſe and impoſſible. As for ſuch of them as concern the higher Claſſes of Chymiſtry, I ſhall ſay nothing (being yet but *ad Corinthum vergens*) but commit them to your Mature Judgment, and Protection, humbly craving your pardon for this my preſumption, and for what Errors or Overſights I may have committed in this Work; and deſiring your Favourable Acceptance of theſe my poor Endeavours. I take leave to conclude with a paſſage of the abovementioned Excellent **Mundanus**. *I am fully perſwaded, that by the Bleſſing of God upon your Sagacious Labours, you will at length obtain that which will abundantly Compenſate your Pains and Coſt.* To which I adjoin my own hearty Wiſhes; and that after you have been as happy in this World, as true Philoſophy can make a Man, you may be Eternally Happy in that which is to come. I am

SIR,

An Honourer of

Your Name and Learning,

CHRISTOPHER PACKE.

THE

THE PREFACE TO THE READER.

THat the *Art of* Chymistry *is very useful and highly serviceable in Physick, Chyrurgery, Husbandry, and Mechanick Arts, is long since evinced by the Excellent Mr.* Boyl (*the Honour both of our Age and Country*) *in his Experimental Philosophy, or Philosophick Essays; who in* Essay I. and II. *shews that the Examination of the Juices of Human Bodies, by the Art of* Chymistry, *may illustrate their Use and Nature. And that by it may be Explicated the Nature of our several Digestions, and their Aberrations. And afterwards* Cap. VIII. pag 194. *speaking of the advantages that* Chymistry *affords to the* Therapeutick *or* Curative *part of Physick, (which is the chief and principal), and to which all the other parts are subservient) is pleased to express himself thus:* I cannot but think that if *Chymistry* did no more than assist us, by the resolution of Bodies, to extricate their more active parts, and partly by such Resolutions, and partly by associating Bodies together, to alter the former Texture of Natures productions, or present us with new Concretes of new Textures; by this very means, if Men want not Curiosity and Industry, to vary and prosecute Experiments, there must necessarily arise such a store of new and active Medicines, that in all probability, many of them will be found endow'd with such vertue as have not been (at least in that degree) met with, in the usual Medicines, whether Simple or Compound, to be bought in Apothecarys Shops; and consequently, even without any notable discovery, or improvement of Principles, Chymists (even as Matters now stand with them) may considerably add to the Pharmaceutical part of Physick. But if the Operations of *Chymistry* were seriously enquired into, and throughly understood, I make little doubt, but by a skilful Application of them, and especially by a series of them, in a Rational and Orderly way succeeding one another, there may be found out a great many preparations of Remedies, both very different from the common Ones, and far more Noble than they. *And presently after he adds.* That if we had but a few Potent Menstruums to dissolve and unlock Bodies with, I scarce know what might not be done in *Chymistry. Then further in that* Essay *where he treats of the usefulness of* Chymistry *to the Empire of Man over the Inferiour Works of Nature; he proceeds to shew that* Chymistry *is very serviceable to Husbandry in all its parts, and to other professions that serve to provide Men with Food or Raiment, or do otherwise minister to the Necessities or Accomodations of Life, as* Bakers, Brewers, Dyers, *&c.*

Thus far this Learned Philosopher: *To which I shall only add this, That if when he wrote those Essays,* Chymists *were able to contribute so much to the Necessities and Conveniences of Mankind, when* Chymistry *was but young in* England, *and but few Chymists who were accurate in their Operations, and perhaps, fewer who had any competency of Learning, or so much as lightly Tincted with the* Hermetick Philosophy; *if, I say, that it discovered so great a light when it had but newly ascended our Horizon, and was, as I may say, but in its Infancy, what assistance may now be had from it, when (notwithstanding all the Obstacles, and unkind usage it hath met with al) it is grown to a more virile Age and Vigour: But although* Chymistry *be much enlarged, and advanced in* England, *in respect of the Numbers, and Qualifications of the Lovers, and professors of it; yet are not Chymists free from pressing Disadvantages, not having the freedom of administring their own Medicines, how powerful and salutiferous soever, and otherwise adapted to the Necessities of the Sick, than the common* Apparatus *of Physick. So, that as the Case now stands, the help and Succour which the Sick and Diseased receive from Chymical Physick, is but very small to what they might have, if knowing Chymists had the freedom of exercising that Art in all its parts, which with much Industry, Labour, and Costs, they have been sollicitous to attain. But when this discouragement of ingenuity and Obstacle of the publick good, shall become more apparent to those in whose power it is to redress it, I do not doubt but it will meet with a Remedy.*

But now, to give some account of my present undertaking. I have at length (by God's help, and the assistance of my Subscribers) finished my Translation of Glauber's Works, *and here present it to the Reader, in the* English *Tongue. How well I have performed it, I must submit to the judgments of others: I could have been very glad to*

have

have seen it done by some abler hand; but when I have heretofore proposed the doing but of some parts of it to those whom I knew might easily have accommodated English *Artists therein; telling them that I wondered so Excellent an Author, should be so long extant, and that none should unveil him of his* Latin *and* German *Coverings, and put him into an* English *Dress. I have had for answer, That this Age was not worthy of it; so that it seems to me, that the Providence of God had reserved it for fitter times, although to be done by one of the meanest of the Sons of* Pyrotechny. *But this I can say, that I have acquitted my self in this matter, as well as the slenderness of my Parts, weakness of Body, and the necessary Affairs of my Laboratory would permit me; but*

——Ubi desint Vires, acceptanda est Voluntas.

I desire the Lovers of Chymistry *to accept my Labours, with the same good will that I have undergone them, having no other end but to serve my Country. And I hereby return thanks to all those generous spirited Gentlemen and others, who have Subscribed to, and promoted this Work, without whose assistance (the Charge being very great, as well as the labour (to me) almost insupportable) it must yet have remained hid and unserviceable to the* English *Reader. But I am in an especial manner obliged to that publick spirited Gentleman (whom I ought to name, were it lawful to do it without his leave) who freely offered me and put into my hands a not inconsiderable part of the Materials for this Work, which part also had been more considerable than it was, had not the Spirit of some, (who unjustly hinder'd it) been as Mean and Sordid, as his was Generous. But that Loss was, in part, made up to me, by a well-minded Artist, to whom I also return Thanks.*

I have Printed this Book upon far better and larger Paper than I proposed to do it in; for at the time of setting forth my first Proposals, I had not the German *Pieces, but when they came to my hands, upon a more accurate computation of the matter, I found that if I should go on to do the Work upon the Paper I had proposed, the Book would swell to too great a thickness for its breadth and length, and not be only ill shaped, but inconvenient to be read. By this means my Subscribers have a much better Book than I promised them, although the Charge hath also been Considerably greater to me, than I at first expected.*

The Reader hath all here in one Volumn which Glauber *ever Printed, as far as I can find upon diligent Enquiry at* Amsterdam, *where all his Writings were Printed, and where I purchased the Original Copper Plates belonging to them. But whereas, as 'tis said in the* Explication of Miraculum Mundi, *page* 177. *That the Cut there described was not Printed in the Latin Copies, nor to be found among the Original Plates; yet notwithstanding, I was unwilling that the Work should go without the Figure of so useful a Furnace as that is, for the Torrefying, or Calcining of Ores, and separating, and depurating their Metals, for which reason I have caused it to be Delineated and Printed with others before the* Continuation of Miraculum Mundi, *after page* 188. *I have also procured from the hand of another Friend, who is a Lover of Art, the Draught of the Refrigeratory, Furnace, or Instrument, which serves for the making the* Mercury of Wine, *purifying, and fixing of* Argent-vive, Antimony, Sulphur, *&c. and many other uses which an Ingenious Artist will find out. This Furnace the Author always endeavoured to conceal, but describes it in some part in the beginning of the sixth part of the* Spagyrical Dispensatory, *to which Description I have added the Figure. The Figures of the several Vessels and Instruments belonging to the Fifth Part of the Furnaces, are referr'd to at the beginning of the Fourth Part, but since, for the better orders sake I have placed them before the said Fifth Part.*

These Twelve following Treatises were never Printed in Latin, *but in the* German *Tongue only,* viz. *The* Third, Fourth, *and* Fifth Centuries; *the* Second *and* Third Appendixes *to the Seventh Part of the* Spagyrical Dispensatory. *The* Book of Fires. Proserpine. Elias the Artist. The three Fire-stones. The Purgatory of Philosophers. De Lapide Animali. The Secret Fire of Philosophers. *All which I have caused to be Translated (my self being ignorant of the* German *Tongue) by a person well skill'd both in the* High-Dutch, *and also in* Chymistry, *whereby I hope this Book will not be altogether unserviceable nor unacceptable even to the Learned; besides, all the Works of this Author that are in Latin are very difficultly (if at all) to be met with at any Book-sellers Shop in* London, *and those that are, at a dear rate: For when I had entered upon this Translation, I was forced to send to* Amsterdam *to have all the* Latin *pieces compleat.*

The Author in many places refers to his Opus Saturni, Opus Vegetabile, *and the* Concentration of Heaven and Earth, *which Treatises, I am assured, were never printed (at least under those Titles) which also seems to be manifest from his Epistle to the* First Century, *or General Appendix, wherein he inculcates, that for want of time, he had inserted the sum of them all in that Treatise. He also mentions a Seventh part of* the Prosperity of Germany, *in the Preface to the Second Part of* Pharmacopœia Spagyrica, *which was never Printed under that Title, but I am induced to believe it is the* Novum Lumen Chymicum, *as partly appears by compariug it with the foresaid Preface. And it is evident that in some parts of his Writings he hath mentioned a Treatise by one Name, and afterwards Printed it by another, as,* The Testimonium Veritatis, *which was afterwards Printed by the Name of* Explicatio Miraculi Mundi. *As for the* Opus Saturni, *I have heard that there are some Manuscript Copies of it, and had hopes of obtaining it from two several hands, but both failed me. I have been also informed, that there are* Five Centuries *in Manuscript more than I have Printed, but could never understand in what hands they were, except one of them,* viz. *the sixth, the proprietor of which would not be so kind as to let me have it to print.*

I have (by the advice of an Honourable Person) left out the Author's Religious and Moral Digressions, where I could do it without prejudice to the matter; as also his Apologetical Writings, except his Apology against Farnner, *which I have printed, forasmuch as it is intermixt with many profitable Secrets, which perhaps, he would not have published, at least not at that time if they had not been, as it were, extorted from him by the ill Treatment of that Ungrateful Man.*

I could not place the several Treatises in that order which the Author published them, without breaking the order of the several parts, as of the Miraculum Mundi, Spagyrical Pharmacopœa, *and* Prosperity of Germany; *for being many years in publishing, they were done promiscuously, but how they succeeded one another so far as the* Nature of Salts, *the Reader may satisfie himself in the Preface to that Treatise. And as his Writings were published by piecemeal, so are the principal Secrets he teacheth, scattered up and down in divers parts of them, in one place he treat-*

eth

eth of a thing obſcurely, or but in part; in another place of the ſame thing openly in that part which he had veiled in the other. Sometimes he declares a Proceſs very openly, omitting only ſome ſmall Circumſtances, or Manual Operation, which would ſeem to many either impertinent, or not neceſſary to be done, when notwithſtanding, the buſineſs will not ſucceed without it. An inſtance of this may be given in his Sal Mirabilis, *whoſe preparation he teacheth obſcurely in the* Nature of Salts, *but more openly in the Second Part of* Miraculum Mundi. *In the* Nature of Salts, *and in the Sixth Part of the* Pharmacopœia Spagyrica, *he teacheth how to Diſſolve Gold therewith, and thence to make a kind of* Aurum Potabile, *but wholly omits the adding of a certain Vegetable Sulphur, without which, the work will not anſwer the Deſcription; this Defect he ſupplys in the* Second Century, *after a twofold manner, the one not obvious to every Man's Apprehenſion, I mean the intent of the Author,* viz. *in thoſe Proceſſes where he ſhews the making of a Vegetable Sulphur; but the other ſheweth the neceſſary Manual Operation in plain and open words. And this he hath done with all his Secrets on ſet purpoſe, that they ſhould be found out by none but the Induſtrious.*

And this hath given occaſion to many, who have not taken pains to read him with diligence, or not being experienced in Operating, to reproach him for an obſcure, yea, even for a falſe Writer, becauſe they have made two or three Superficial, or Unskilful Trials of his Proceſſes, which have not ſucceeded according to their Expectations; when indeed, the fault was in themſelves, either in not perceiving the Author's intention, or their own want of skill in rightly managing the Operation: And I know ſome Perſons that ſometime ſince ſaid Glauber *had been too dark in his Writings, who now think he hath wrote too plain.*

But having mentioned this, I will here (for the ſake of thoſe Country Gentlemen, who have ſubſcribed to this Work) a little Elucidate the Author's Proceſs about the inverſion of Common Salt, with Lime, for the enriching of Poor and Barren Land. He indeed ſpeaks of ſeveral Saline Preparations, which greatly promote the fertility of the Earth, but this with Common Salt, and Lime, is the cheapeſt of all, and alſo is moſt eaſie to be done, for any Plowman, or Labourer, having but once ſeen it done, may be preſently able to manage it. The ſum of it is, that Common Salt be turn'd from its ſharpneſs, into an Alcalizate Nature (which is hot and fat) which then by its Magnetick force will attract from the Air a Vivyfying, Fructifying, Salt-nitrous power, and long retain it in the Earth, which is the cauſe of all Growth and Vegetation, as the Author ſheweth in the Continuation of Miraculum Mundi, *and many other places; but gives the Proceſs of the preparation in plain and open words in the Appendix to the Fifth Part of the* Proſperity of Germany, *page* 416.

Neither is the practice of preparing either the Land, or the Seed, in order to the better Crop, altogether Novel, as may partly be ſeen in Virgil, Georgic Lib. 1. *where he ſaith,*

Semina vidi equidem multos medicare ſerentes,
Et Nitro prius, & nigra perfundere amurca;
Grandior ut fœtus ſiliquis fallacibus eſſet, &c.

Which in *Engliſh* may ſound thus:

Some have I ſeen their Seeds to ſow prepare,
With Nitre and Oyl-Lees, for they by care
Will grow far greater, and be ſooner ripe, &c.

The Lime muſt be ſpread upon the ground, where no Rain can come to it, till it ſlake it ſelf by the Air, and fall into a Powder; of this Powder you are to take four hundred weight to one hundred weight of any common foul Salt, which is too impure for the uſe of the Kitchen, where ſuch may be had, otherwiſe clean Salt, (for that will be cheaper than Dung) the Salt and Lime are to be well mixed, and then moiſtened with ſuch a quantity of Water, (or rather Urine where it may be had) as will bring the Lime and Salt mixed, to the Conſiſtency of a ſtiff Mortar. Of this Maſs Balls are to be made about the bigneſs of ones Fiſt, and laid under a Shead, or Hovel to dry; being dried, they are to be burnt in a Kiln as Lime is, ſo that the Balls may be red hot for an hour at leaſt; or where no Lime-Kiln is near, they may be burnt by building a Pile in the Field, firſt with a Lay of Wood, then a Lay of Balls, then Wood again, and ſo till all the Balls are placed fit for burning. When the Balls are burnt, they are to be again placed upon a Floor under a Shead, or Hovel, where they may be expoſed to the Air, but kept free from the Rain, and if you break them with a Clod-beater preſently, the Air will the ſooner act upon them, and cauſe them again to fall into a Powder; which Powder may then be carried out and ſpread, or rather ſowed out of a Seedlet, thicker or thinner as the Land ſhall require. Provided this be done in the beginning of Summer about the time of Fallow, for that being many Months before the Seed is to be ſowed, the fieryneſs of this rich Compoſt will be Contemperated by the Air and the Earth, and changed into a Nitrous fatneſs, which joining it ſelf with the Earth, is again Magnetically attracted by the Seed when it is ſown, whoſe growth is thereby ſwiftly promoted, and its Multiplication much augmented. But if any ſhould caſt this Matter upon his Land ſoon after it is burnt, and preſently after that ſhould ſow his Seed, inſtead of having a greater Crop than he uſed to have, he would have a leſs, or perhaps none, that Year, but the next Year, and ſo on for many Years, the ſame Land would bring forth plentifully. Therefore it is neceſſary, that this Matter ſhould lie ſix or ſeven Months ſpread upon a Floor, and now and then turn'd with a Shovel, as you turn Malt, that it may be Contempered, and Animated by the Air; or be caſt upon the Land ſo long before the Seed be ſown. The reaſon is the very ſame as with Dung, for none takes freſh Dung and ſpreads it upon his Land when he is about to ſow his Seed, for if he ſhould, his Seed would be burnt up; but the Husbandman lets his Dung lie ſome time to rot, as he calls it, after which he lays it on his Land, and lets it lie ſpread ſome time before he Plows it in, and all this is but to Contemper the heat of the Animal Salt contain'd in the Dung, and turn it into a Nitrous Nature. Thus much I thought good to ſay about this Matter in the plaineſt words, leaſt any, not throughly underſtanding the Author's Intention, ſhould erre in the firſt Experiment, and ſo unjuſtly blame the Author, and forbear themſeldes and deterr others

from profecuting that eaſie Practice, which I am confident, if rightly managed, will bring much profit to many perſons in this Nation. This muſt alſo of neceſſity be a profitable Work to thoſe who will undertake it upon the account of making of Salt-petre; *eſpecially to ſuch as underſtand the Nature and Generation of that Excellent ſalt, which is of ſuch incomparable uſe in the Preparation of Medicines, ſeparating of Metals, and in many Mechanick Arts.*

Now forasmuch as in this Work Sal Mirabilis, Spirit of Nitre, *and* Spirit of Salt, *are recommended to very many uſes, and every one that hath a mind to make Experiments with them, may not have the knowledge, or the conveniency of preparing them, I hereby ſignifie, that I intend (God willing) to prepare and keep by me the Author's* Sal Mirabilis *of both ſorts, that peculiar* Spirit of Salt, *which he commends againſt the Scurvy and other Diſeaſes, and alſo to keep Beer from ſowring in the Summer, in the* Conſolation of Navigators. *His* Panacea of Antimony, *and* Golden Panacea, *ſpoken of in the Second Part of the* Pharmacopœia Spagyr. *the* Explication of Miraculum Mundi, *and divers other places. His* Aurum Diaphoreticum, *alſo the* Tincture of Gold, *or* Aurum Potabile, *are deſcribed to be made of the* Irreducible Blood of the Lyon) *in the Sixth part of the* Spagyrical Pharmacopœia, *Chap.* 22. *Theſe I purpoſe conſtantly to keep by me for the accommodating of Phyſicians, and others, who ſhall have occaſion to buy them. Thoſe are Excellent Medicines, and ſuch as a Phyſician may have ſome confidence in; and indeed, this Book contains a great variety of ſuch Medicines as will get a Phyſician Honour, which (I hope) will be tryed by all thoſe who delight to do good, and be brought into uſe for the general Help and Comfort of the ſick. For I freely confeſs, that if I have any thing in Medicine, beyond what is commonly known, I have had the Foundations of it from this Author; and if God ſhall pleaſe to grant me life to a fit time, I doubt not but I ſhall from thoſe Foundations be able to raiſe ſuch a Superſtructure as ſhall teſtifie the truth of his Writings, and powerfully evince the Worth and Excellency of Chymical Medicines, and that demonſtratively in matter of Fact,* viz. *by the Curing of both Acute and Chronick Diſeaſes.*

And now by way of Concluſion, I have only one thing more to add; and that is a Requeſt to all the Ingenious Lovers of Chymiſtry, that they would not occaſion this Work which I have undergone with ſo much labour, and loſs of time from my private Concerns, meerly for the good of others, to redound to my own hurt; my meaning is, That I might not be put to the charge and trouble of Letters about Curious Enquiries, wherein I am to have not the leaſt profit: This I mention, becauſe I have had divers ſuch Letters come to my hands ſince I have been about it, and that ſometimes two or three very long ones with many Queries, in one Week. Now ſhould this continue, and I endeavour to ſatisfie all the Doubts, and gratifie all the Curioſities of all ſuch non-conſidering perſons, truly I ſhould have no time beſides what this would take up, to provide for my ſelf and Family. But notwithſtanding what I have ſaid, if any Ingenious Perſon ſhall ſtand in need of my Aſſiſtance, in preparing of any thing for him, or otherwiſe, wherein I may have a reaſonable recompence for my Time and Trouble, I will be ready to give him the beſt aſſiſtance I can. For I am now but juſt ready to receive a Writ of Eaſe from three Years daily labour and care about this Work, and I would be willing to enjoy it ſome time, that I might again with diligence apply my ſelf to my Laboratory, the effects of which, if God ſhall ſee good, may at one time, or other, ſhew themſelves to the World. In the mean time, I wiſh all Honeſt and Ingenious Lovers of the Spagyrick Art, good Succeſs in their Studies and Labours, that thence the Penuries and Miſeries of Mankind, eſpecially of the ſick, may be effectually remedied; that they may Cooperate as Inſtruments with the great ends and providences of the Almighty, to bring about that time, in which God ſhall be Glorified all the World over, and Men live in a more ſerene and tranquil condition than yet they have done, which ſhall always be the Deſire and Prayers of him that is a Lover of Pyrotechny, *and Honourer of all true Artiſts.*

From my Houſe next Door to the Sign of the *Gun* in *Little Moor-Fields*, the 1688.

Chr. Packe.

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THE FIRST PART OF Philosophical Furnaces.

Containing a new Art of making *Spirits*, *Oyls*, *Flowers*, and other Medicaments, by the help of the first of those Furnaces, after a very easie and peculiar manner out of Vegetables, Animals and Minerals: With their Chymical and Medicinal use.

A *Preface* to the Courteous Reader.

I *Have hitherto reserved to my self as Secrets, some peculiar Furnaces and compendious Ways of Distilling, which with diligent study and speculation I found out some few years since, by which many excellent Works, impossible to be done by the vulgar Art, may be performed; but now at last I have, considering with my self how advantageous it may be to the World, determined to conceal this Art no longer, but for the good of my Neighbour to publish it, by giving to* Chymists *a perfect and fundamental information of this new-invented Art, that they may no longer for the future spend their Time and Money in long tedious Operations, but may after a more easie way, by the help of my Furnaces, be able to effect many excellent things. Now this Book shall be divided into Five Parts, the first whereof shall teach how to build a Furnace, in which incombustible things are distilled and sublimed, and indeed such things which cannot be done by Retort or any other Vessels, and how the Spirits, Flowers, and Oyls of Minerals, and Metals may by the help thereof be prepared, as also what their Use and Vertues are.*

In the Second Part shall be shewed another Furnace, in which combustible things, as Vegetables, Animals, and Minerals are distilled and most perfectly subtilized: by help whereof many most excellent Medicaments for the cure of most grievous and otherwise incurable diseases may be prepared.

In the Third shall be taught a certain new invention hitherto unknown, of distilling Burning Spirits, as of Wine, Corn, Fruits, Flowers, Herbs and Roots; as also the Waters of Vegetables and Animals, and that in a great quantity, in a short time, and without much costs; as also of boyling Beer, Mead, Wine, and other things, which otherwise are made in Copper or Iron Vessels; and all this by the help of Wooden Vessels, and benefit of a certain small Copper, or Iron instrument of two or three pound weight, and that after a certain easie manner without Furnaces. This newly-invented Art doth also teach divers Chymical Operations, as Putrefactions, Digestions, Circulations, Extractions, Abstractions, Cohobations, Fixations, &c. And this invention is very necessary and profitable for young beginners in this Art, for they need not in the making of burning Spirits, Waters of Vegetables, Extracts, and other Medicaments so many Furnaces, and so many Copper, Iron, Tin, Earthen and Glass Vessels, for it is here taught how all the aforesaid Operations may be done onely by the help of a certain small Copper or Iron Instrument in Wooden Vessels as well as by Alembicks and other great Copper Vessels, by which means a great deal of Costs is saved.

In the Fourth Part shall be taught another certain, and hitherto unknown Furnace, in which all Chymical Operations may most easily be done: being most profitable for the trying of the Natures of Minerals and Metals; as also for the proving, examining, melting, cupelling, and separating of Metals, that nothing may be lost of them, and that after a compendious and easie way, and also to great advantage.

In the Fifth shall be taught how to make and prepare Iron, Earthen, Glass, and other kind of Instruments necessary for the aforesaid four Furnaces, as also other necessary, and most profitable Manuals.

And in the First Part, the Fabrick of the first Furnace being delineated, I shall also shew how by the help thereof may be made Spirits, Oyls, Flowers, and other most profitable Medicaments, also their Vertues

A *Preface* to the Reader.

Vertues and Uſe, and that as faithfully as I may, and without fraud. And truly I do not doubt but thoſe of underſtanding will approve of this Work, but ignorant Zoilus's *will contemn it: For it is ſaid according to the Proverb,* He that builds by the highway, will hear many things from them that find fault, *and eſpecially from the vulgar,* &c. *But it would be well if thoſe* Thraſoes *would put forth ſomething more excellent, before they find fault with and carp at other Mens pains and labours.*

Wherefore let no one raſhly judge of this Work, untill he be throughly informed concerning the ſame, and then I do not doubt but the Authour ſhall be by him commended.

And if haply all things ſhall not preſently ſucceed well, to his mind, with him that ſhall build this Furnace, and operate therewith, let him think with himſelf that perhaps he hath erred in ſome part, (for it is a new and unknown work, in which any one may eaſily err) and not preſently therefore murmur againſt the Authour, blaming him, becauſe he hath not wrote clear enough, but let him aſcribe it to his own ignorance, and let him ſtudy to underſtand the Authour's meaning, and ſtill be practiſing upon it, and then I do not doubt, but he will have better ſucceſs, which I pray every one may have. Amen.

The EXPLICATION of the Figures of the firſt Furnace in all its parts.

FIG. I. E. *The firſt Subliming-Pot, which is ſet into the upper hole of the Furnace.* D. *The upper hole of the Furnace.* F. *The ſecond Pot.* G. *The third.* H. *The fourth.*

FIG. II. A. *The Aſh-hole, with the wideneſs of the Furnace.* B. *The middle hole, by which the Coals and Matter to be diſtilled, are caſt in.* C. *A* Stopper *of* Stone, *which is to ſtop the ſaid hole after caſting in the matter.* D. *The upper hole with a certain falſe bottom, which is to be filled with* Sand. E. *The* Cover *of the upper hole, which is put on after the putting in the* Coals *and* Materials. F. *A Pipe going out of the Receiver, and joyned to the firſt Pot.* G. *The firſt Receiver.* H. *The ſecond.* I. *The third.* K. *A* Stool *on which the firſt Receiver ſtands, having a hole in the middle, through which the Neck of the firſt Pot, to which a Diſh is annexed, paſſeth.* L. *The Diſh through the Pipe whereof the refrigerated Spirits diſtill.* M. *A Receiver into which the Spirits collected in the Diſh do flow.* N. *A Screw to be raiſed higher at pleaſure for the better joyning the Receiver to the Pipe, and it goeth through a* Stool. O. *The place of the Pipe for the Diſtilling of Spirit of Vitriol and Allom.* P. *A Grate conſiſting of two ſtrong croſs Iron Barrs, faſtned in the Furnace, and four or five more leſs, that are moveable, for the better cleanſing of the Furnace.*

FIG. III. G. *The firſt crooked Pipe fitted to the Pipe of the Furnace.* F. *The Pipe of the Furnace.* H. *A Receiver fitted to that Pipe, and ſet in a Tub of water, for accellerating the* Operations: *which Receiver hath a Cover with two holes, through the firſt whereof goeth a ſingle crooked Pipe, and through the other two crooked Pipes, whereof one goeth into the Receiver, as did the ſingle, and the other out of the Receiver* H, *into* H. H. I. *The Tub of Water.* M. *A third Pipe. By this way Flowers are ſublimed, and Spirits diſtilled ſpeedily, and in great quantity.*

THE

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fig: III

fig: II

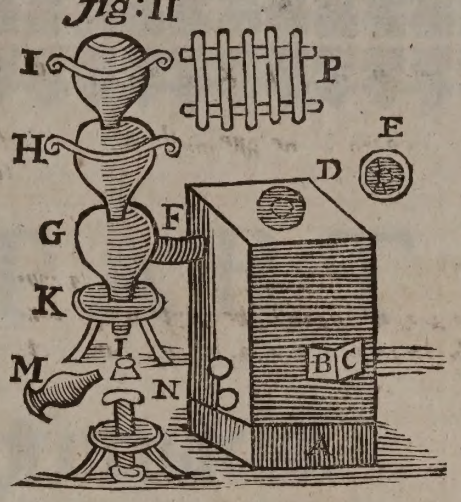

fig: I

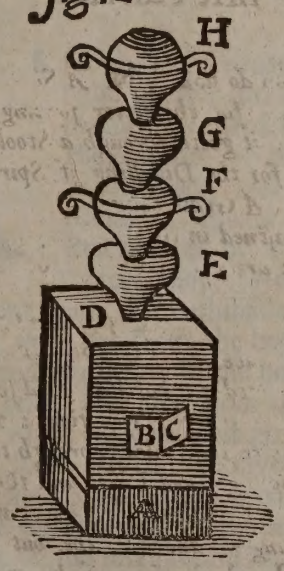

fig: IV

The Second Furnace.

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Fig: II

Fig: III

Fig: IV

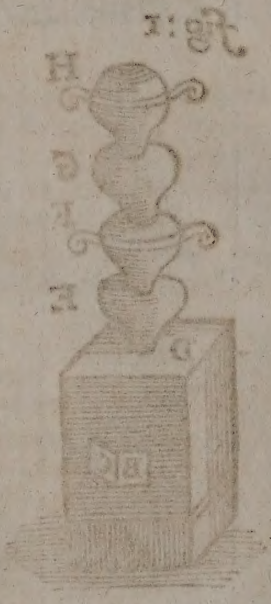

Fig: V

The Second Furnace.

THE FIRST PART OF Philosophical Furnaces.

Of the Structure of the First Furnace.

AS for the first Furnace, it may be built greater or lesser as you please, a regard being had of the quantity of the Matter to be distilled, and also either round or square; either of Bricks, or by a Potter with Potters Clay. Now when the Diameter is of one span, *viz.* withinside, the height must be of four, *viz.* one from the bottom to the grate, another from the grate to the hole made for putting in of Coals, and two from thence to the top of the Pipe, which must at least go forth out of the Furnace one span, lest the receivers should by the neerness of the Furnace be heated. The Pipe also must have on the fore part a Diameter, answering the third part of the intrinsecal Diameter of the Furnace; also a little larger on the hinder part than the forepart. Let the grate be such an one, as may be taken out at your pleasure and made clean, being stopt by the Matter that is cast in and distilled: for it is easily stopt in distilling of Salts melted with the coals, whereby the aire is kept from coming to the fire, and the distillation by consequence hindred: Or let there be put into the Furnace cross-wise two strong iron bars, upon which lay four or five lesser, distant the one from the other the breadth of a finger, going a little out of the Furnace, by which when they are stopt, you may take them out with a pair of Tongs, and cleanse them from the burnt Matter, and then again put them into their own places: wherefore also the Furnace must on the fore part be open under the grate, that you may the better order the grate.

Also the grate must have above, a covering of Iron or Stone, with a hole in the middle thereof with a certain distinction, which is to be filled with sand, that the cover may the better and more fitly shut the hole, and prevent the exhaling of the spirits which by this means will, being forced, go forth thorow the Pipe into the receivers, after you have cast in the matter which is to be distilled.

Of the Receivers.

Let the Receivers be made of glass, or of strong earth, which may retain the spirits, and such is the Waldburgick, Hassiack, Frechheimensian, Siburgic earth, *&c.* They are better that are made of glass, if they are to be had, and those especially which are made of strong and firm glass, which may be smoothed about the joints with a Smiris stone, and so fitted that they may the better be joyned together, and then they need not luteing (but how they shall be smoothed with the Smiris stone, and be fitted, shall be taught in the Fifth part, which treats of Manuals) because by this means they are joyned so close, that no spirits can go through the joynts: otherwise you must close the joynts with the best Lute, such as will not let the spirits exhale, which shall be taught in the Book treating of Manuals. The form of the recipient you may see in the delineation thereof. As for the quantity thereof, know that by how much the greater they are, so much the better they are, for then you need the fewer, but the more, by how much the lesser they are. Let the superiour orifice be larger than the inferiour, so that alwaies another receiver may with its inferiour orifice be joyned to it, and let the inferiour orifice have a Diameter of three fingers breadth, or thereabouts; I mean in case the Diameter of the Furnace be of one span. For a greater Furnace requires greater holes, as also orifices of the receivers, by which means a sufficient and due proportion of air may be given to the fire: or if the Diameter of the Furnace be more than a span, it must also have two or three pipes (which being considered together, should have a wideness answering the wideness of the third part of the Furnace, for so great a wideness, and so much air is required, if the fire burn freely and do its office) to which vessels of the aforesaid proportion must be applyed, that the fire be not choaked.

Now, the Figure that is annexed will teach the

conjunction of the Receivers, as alſo their application to the Furnace. And, in the firſt place, the Receiver ſtands in a three-foot ſtool bored thorow in the middle, that the neck of the firſt Receiver may paſs thorow, to which is applyed a diſh with a pipe receiving the dropping ſpirits: To the firſt there is joyned a ſecond, and to that a third, and ſo conſequently (*viz.* near unto a wall or ladder) ſo many as you pleaſe. Let the upper Receiver, and indeed all the reſt, be left open: To the lower as hath been ſaid, is joyned a diſh with a pipe, by which the diſtilled Spirits run down into another certain glaſs veſſel added thereunto, which being filled, is taken away, and another is ſet in the place of it, becauſe that is ſet under it without luting, and therefore may eaſily be changed. And if you pleaſe to diſtil any thing elſe, you may take away that diſh with a pipe, and make it clean, and then joyn it cloſe again (that no ſpirit may breath forth) to the neck of the lower receiver. And if that diſh cannot be ſo cloſely joyned, that nothing exhale, pour in a ſpoonful of Water, for that doth aſtringe, neither doth it hurt the ſpirits, becauſe in the rectifying it is ſeparated.

Of the ſubliming Veſſels.

Theſe you need not make of glaſs, or of ſuch earth as may retain the ſpirits, as hath been above mentioned; it is ſufficient, if ſo be they be made of good common Potters earth, and be well glazed within, *viz.* of ſuch a form and figure, as appears by the annexed delineation.

Yet you muſt chuſe good earth that will endure the fire, for the lower pots are ſo heated by the fire, that they would be broken if they ſhould not be made of good earth.

Now I will ſhew you in general the manner it ſelf of diſtilling; as alſo, the manual neceſſaries in every diſtillation.

The manner of Diſtilling.

In the firſt place, let there be ſome burning Coals put in, which afterwards muſt be covered with more until the Furnace be full almoſt to the pipe, which being done, let not the uppermoſt cover be laid over its hole (that the heat and ſmoak may paſs that way, and not thorow the pipe, and receivers, which will thereby be red hot; and this will be a hindrance to the diſtillation) until the fire be ſufficiently kindled, and the Furnace be throughly hot; then caſt in, with an Iron ladle, of the matter prepared for diſtillation as much as will cover the Coals, which being done, ſtop the Furnace very cloſe, by preſſing down ſtrongly the upper cover upon its hole or ſand, which is put in the lower part of the hole, being a place made for that purpoſe. Now let him that caſts in any thing thorow the middle hole, preſently ſtop it with a ſtopple of ſtone, and that very cloſe, for by this means all thoſe things which were caſt in, will be forced, after the manner of a thick Cloud, to break forth through the pipe into the receivers, and there to condenſe themſelves into an acid ſpirit or oyl, and thence to diſtil into the diſh ſet under, through the pipe whereof they do yet diſtil down further into another glaſs receiver. The Coals being burnt out, and all the ſpirits being come forth, you muſt caſt in more Coals, and more materials, until you have got a ſufficient quantity of Spirits. In this way of diſtilling, you may at your pleaſure ceaſe, and begin again without any danger.

When you will make clean the Furnace, you need do nothing elſe, then draw out the Iron bars that lye on the croſs bar, that the *Caput Mortuum* may fall down, which afterwards may be taken away with a Fire-ſhovel, which being done, you muſt put in the bars again, and lay them on the croſs-bars as before, upon which you muſt caſt burning Coals, and upon them others, until there be enough, then on them all, being well kindled, caſt your materials.

When you go to make clean the receivers, and to begin to diſtil another thing, you need not remove them, but only pour pure Water into them, *viz.* by their upper receiver, by the deſcending whereof the other are purified.

And by this way, not only out of Vegetables, and volatile Minerals (incombuſtible) but alſo out of fixed Metals and Stones, ſpirits, oyls, and flowers, are drawn forth wonderfully, eaſily, and in good quantity, which otherwiſe could never have been done by the vulgar art of diſtilling.

Now, in this Furnace are diſtilled only ſuch materials, which being diſtilled, yield an incombuſtible humidity, as common Salt, Vitriol, Allom, and other Minerals and Metals, each of which doth yet require their peculiar manuals, if operated upon.

Now, becauſe this Furnace doth not ſerve for every matter, becauſe the materials to be diſtilled are caſt upon burning Coals, which are things combuſtible, I have determined in the ſecond part to give another, *viz.* a leſſer, unlike to this, yet convenient to diſtil all combuſtible things that are endued with volatile ſpirits, as Tartar, Harts-horn, Amber, Sal Armoniack, Urine, *&c.* There are, by the help hereof, made moſt ſubtile, volatile, ſulphureous ſpirits of Salts, and Minerals, as of common Salt, Vitriol, Allom, Nitre, Antimony, and of all other Minerals and Metals, which otherwiſe, without this Furnace, could not have been made, with which ſpirits, wonderful things are performed in Medicine and Alchymy, as in the Second Part ſhall be demonſtrated more largely.

Now I will ſhew you a way to make other Receivers belonging to the firſt Furnace, and indeed, ſuch as are more fit for ſome Operations, as the former were more fit for others: wherefore let him that will operate, chuſe theſe, or the other, as he pleaſeth.

As therefore the former being erected upwards by a wall, or ladder, by which means the ſpirit might aſcend from one into another ſo long, until being refrigerated and condenſed might again drop downward into the diſh that is annexed thereto: ſo theſe are a contrary way ſet and placed collateral in a veſſel filled with cold Water to condenſe the ſpirits, by which means you need not ſo many receivers; alſo they muſt not be faſhioned like the former, as to be open above, and below, but only above like pots that ſerve for boyling: but this you muſt obſerve, that by how much the deeper and larger they are, by ſo much the better they are.

Alſo you muſt joyn them together by the help of earthen pipes, being ſo diſtinct, that the ſpirits may be kept back, being yet hot (and not refrigerated) from paſſing out of one into the other, but being forced through the middle of the ſeparation of the pipes, may go to the bottom of every receiver, and thence ariſe by another pipe into another receiver that hath a double cover like the former, where again deſcend-

deſcending to the cold bottom, remain refrigerated and condenſed. Now three or four of theſe are enough (whereas of other, thirteen or fifteen are required) a regard being had of their Greatneſs.

You may ſee the figure of theſe receivers, as alſo their joyning together by the annexed delineation. Now, for the moſt part, one is ſufficient for him that diſtils a few things, eſpecially if the matter be not pretious, and then let one crooked earthen pipe at leaſt be joyned, one arm with the pipe that goeth forth of the Furnace, the other with the Receiver, but ſo that it go into the receiver downwards, even to the middle thereof, and then you need not ſhut the orifice of the receivers, for it is no great matter if ſomewhat evaporate, *viz.* if the matter to be diſtilled be not pretious. And by this way may new ſpirits and new flowers be made every hour, with the help of one Furnace, and one recipient, but with this caution, that for every new diſtillation, the recipient be waſhed with Water before it be put to the pipe; which being put to, you may then caſt your ſpecies into the Furnace; and this do till you have a ſufficient quantity of ſpirits.

And this way of diſtillation ſerves eſpecially for the trying of the natures and properties of many and divers Minerals, ſuch as yield in the fire ſpirits and flowers. For it would be too tedious in every new diſtillation to apply a new and diſtinct receiver: as alſo many ſtudious of the Chymical art would quit their ſtudy, being able to make by retort but one tryal in a day. And no wonder if expences, and loſs of time ſhould deter many.

Now here there is no need of many Retorts, nor of luting them, nor of receivers, and ſuch like ſuperfluous things; neither is there here required the conſtant preſence of the operator, the obſervation of the regiment of fire, the neglect whereof would otherwiſe endanger the loſs of the retorts and receivers, and by conſequence the loſs of labour. Theſe and ſuch like tedious things are not here to be cared for, becauſe it is ſufficient only to caſt the Matter upon the coals, and cover the Furnace, and then preſently go forth the ſpirits, and flowers of the ſame kind with their mineral: of which when thou haſt got a ſufficient quantity, thou muſt draw out the Iron bars, upon which the coals lye, that they may fall down, and be taken away; and whilſt the Furnace is yet hot, to put in the Iron bars again, and upon them to lay freſh coals, which then will of their own accord be kindled with the heat of the Furnace. In the mean time you muſt take away the receiver, and make it clean and ſet it to again, or if you had rather put another clean one, *viz.* for the new diſtillation of another Matter.

And by this way, divers things may be in the ſpace of one hour diſtilled, and ſublimed, *viz.* in a ſmall quantity. But he that will diſtil, or ſublime in a greater quantity, let him take three or four pots that the ſpirits may paſs from one into another, that nothing thereof be loſt. Here needs not (as I ſaid before) the continual preſence of the operator, for he may be gone, ceaſe, or repeat as he pleaſe, becauſe the work is without danger of breaking the retorts, and receivers.

He that knows the uſe of this Furnace, may do many things in a ſhort time with little coſt. For any one may do more by the help thereof in one hour, than in the common way in twenty four, by which way alſo there is a great ſaving of coals, becauſe ten pound of coals will do more this way than a hundred the other. As for example, he that will try, ſhall make a pound of ſpirit of Salt in one hour with three, four, or five pounds of coals; whereas after the other way are required fifty or ſixty pounds, and at leaſt twenty or thirty hours time, *viz.* in the common way by the help of retorts: which is indeed very tedious.

Alſo by this way may be made the flowers of minerals, and metals, in a great quantity, very eaſily, and in a ſhort time without great coſt, ſo as that in one hours ſpace, with three or four pound of coals may a pound of the flowers of Antimony be made. And this is no ſmall help to the Phyſitian, and Chymiſt.

Moreover this furnace being once built, endures for many years, and being broken is eaſily repaired.

And by this way you ſhall need only materials to be diſtilled, no retorts and receivers are in danger, by which means much coſt is ſaved.

Beſides the aforeſaid ways, I have yet another, and that more compendious, *viz.* of diſtilling, and ſubliming, and more eaſy, by which means in a very little time, an incredible quantity of ſpirits of Salts, and flowers of Minerals, and metals may be made; which I ſhall refer till another time, becauſe for the preſent I have ſaid enough.

Now I do not doubt, but diligent Chymiſts will follow my ſteps, and find out thoſe things which are unknown to me. *For it is eaſier to add to things found out, than to find out things unknown.*

The conſtruction therefore of the furnace being in my opinion clearly ſhewed, there now follows the manner of diſtilling, and ſubliming with it.

Although haply, and contrary to my hope any obſcurity ſhould be met withal, yet one proceſs will explain another: and the diligent operator, and ſearcher of Nature ſhall without doubt, by his practiſe attain the effect after the ſame manner as I have preſcribed: which together with the bleſſing of GOD, I heartily wiſh all pious Chymiſts, *Amen.*

How the Spirit of Salt is to be diſtilled.

THE reaſon why I enter upon the ſpirit of ſalt, before I ſay any thing of the ſpirits of vegetables, is this, *viz.* becauſe it is even the chiefeſt, which can be made in this furnace: for few exceed this in ſtrength and vertues; wherefore I alſo have given it the preeminency. Neither is there any of the acid ſpirits, about which the Chymiſts hitherto have been more buſied, than this, wherefore alſo it is of all, of greateſt price, *&c.* for ſome have mixed ſalt with potters clay, and have made this mixture into little balls, which they have to get the ſpirit, forced by retort in a very ſtrong fire: ſome have mixed ſalt with bole, ſome with the powder of tyles, others with burnt Allume, *&c.* Schroder

Others uſing a more compendions way have made ſalt to flow in a retort, which hath a pipe both in the upper, and hinder part; by the uper pipe of which they have dropped in cold water, to elevate the ponderous ſpirits of the ſalt, but by the hinder they have blown with Bellows, to force the ſpirits into the retort: and this way is not altogether to be ſlighted, yet it hath this inconveniency, that in proceſs of time the retorts are broken

that they can no longer retain the ſalt, and ſo the diſtillation is intercepted. Some have attempted it with Iron retorts, but by this means the ſpirits have been deaded, becauſe they eaſily ſet upon the Iron, whence inſtead of ſpirit they have had flegme. And ſuch, and other tedious wayes of diſtilling they have invented; and by the beſt of them indeed they could ſcarce diſtill one pound in 25. or 30. hours ſpace with 50. 60. or 100 pound of coals; this being the reaſon, becauſe the ſalt is very little wrought upon, and therefore it is that few ever had the ſpirit right and good, whence alſo the vertues thereof have been unknown.

And this therefore I was willing to make known, that it might appear, what price this ſpirit hath hitherto been of, and how eaſie, and abundantly, and with what little coſt, it may after my new invented way be made.

It is ſaid above, that the materials may in this way of diſtilling be immediately caſt into the fire; yet this muſt be wiſely underſtood. For although ſome of the ſpecies may without any preparation be immediately caſt into the fire, yet it doth not follow that all and every one of them muſt: for in ſome of them we muſt uſe our diſcretion, as in the diſtilling of ſalt. For if the ſalt be immediately caſt into the fire, it will not only yield no ſpirits, but will leap ſo long upon the coals, until it find a deſcent to the loweſt part of the furnace: Now this may be prevented divers wayes; and firſt indeed after this manner: Diſſolve ſalt in common water, then quench burning coals with this water, that they may be impregnated with the ſalt, which afterwards ſet on fire in the furnace: but you muſt firſt caſt in other burning coals, upon which you muſt caſt thoſe that are impregnated with ſalt untill the furnace be full, as is above ſaid: and while the coals burn, the ſalt is reſolved by the force of the fire into ſpirit.

Now you muſt obſerve that he that diſtils ſpirit of ſalt after this manner, muſt make choice of glaſs receivers, becauſe the ſpirit whileſt it is hot, penetrates by reaſon of its wonderful ſubtilty, thoſe that are earthen. And this ſpirit is of a moſt grateful taſte. But in defect of glaſs receivers, I ſhall ſhew you another way wherein you may uſe thoſe that be of earth.

Mix ſalt, and vitriol or allome together, grinding them very well in a Morter (for by how much the better they are ground, the more Spirit they yield.) Then caſt this mixture into the fire with an Iron Ladle, *viz.* ſo much of it as will be ſufficient to cover the coals, and then with a great fire the ſpirits come forth into the receivers, where being coagulated, they diſtill down into the diſh, and thence into another receiver. And if thou knoweſt how to work aright, the ſpirits will like water continually run out thorow the pipe, the thickneſs of a ſtraw; and thou mayeſt eaſily every hour make a pound of the ſpirit. Now the reaſon why thou ſhalt by this way have more ſpirits than by the other, is this, *viz.* becauſe the vitriol and allome, which is mixed with the ſalt, makes it flow quickly, by which means it is prevented from falling down through the coals to the lower part of the furnace, but ſticking to the coals is almoſt all of it turned into ſpirits. The *Caput Mortuum*, which is reddiſh, eaſily falls with the aſhes through the grate, and can no more be diſtilled, but yields by excoction a white fixed ſalt, which ſerves for the flowing of metals; and being diſſolved in warm water ſerves alſo for a glyſter againſt the Worms, which it kills, and purgeth alſo the Bowels.

Thou wilt object, that the ſpirit made after this manner, is not the true ſpirit of ſalt by reaſon of the mixture of vitriol and allome, but mixed, and compounded. I anſwer; There can by this way diſtil no ſpirit of vitriol, or allome, being that which I often tryed, caſting vitriol or allome into the furnace, where I received no ſpirit at all; the reaſon of this is, becauſe theſe ſpirits are far more heavy than the ſpirit of ſalt, neither can they aſcend ſo great a heighth, *viz.* of three ſpans, but are burnt, whence unleſs the flegme, nothing diſtils. Wherefore the ſpirit of ſalt that is made after this manner is not mixed, but pure and meer ſpirit of ſalt, of the ſame taſt and vertue as that is of, that is made by it ſelf; becauſe in this furnace the ſpirit of allome and vitriol, cannot be made unleſs a pipe go out of the furnace neer the grate, as you may ſee by the delineation of the furnace, for otherwiſe it cannot be made; beſides, theſe ſpirit are better, and more truly taught in the ſecond part. And if it be granted that ſomewhat together with the ſpirit of ſalt comes forth (which is yet impoſſible) what hurt I pray you comes from thence either in the ſolution of metals, or medicine? wherefore the ſpirit made after this way is not to be ſuſpected. Yet I will ſatisfie the incredulous, and will ſhew him another way without the addition of allome or vitriol, for the diſtilling of that ſpirit, but that will be in the ſecond part of this Book, where I will teach you the furnace, by which is made ſpirit of Nitre, Aquafortis, and amongſt combuſtibles, the Oyles of vegetables, and Fats of animals and other things which cannot be made by this: and by this way I will ſatisfie thoſe, who are not pleaſed with the former.

Now for want of glaſs receivers, we are forced to uſe earthen, but theſe cannot retain the ſpirit of ſalt made after the aforeſaid wayes; in which caſe I could indeed diſcover a certain little manual, by vertue of which the aforeſaid ſpirit may be received even in a great quantity in earthen recipients: but for certain cauſes I ſhall here be ſilent, and ſhall refer it till the edition of the ſecond part. Let it ſuffice therefore that I mentioned ſuch a thing, wherefore omitting that, I ſhall proceed to ſhew you the vertues, and uſe of this ſpirit, as well in Alchymy, as in Medicine, and other Mechanical Arts.

Of the Uſe of the Spirit of Salt.

IT is worth while, to ſpeak of the power, and vertues of this excellent ſpirit; what other Authors have clearly deſcribed, I ſhall here paſs over, and refer the Reader to the writings of thoſe Authors; touching only on ſome few of which they ſaid nothing.

The Spirit of ſalt is by moſt accounted a moſt excellent medicine, and ſafely to be uſed, as well inwardly as outwardly: It extinguiſheth a preternatural thirſt in hot diſeaſes, abſtergeth and conſumeth flegmatick humours in the Stomack, exciteth the Appetite, is good for them that are hydropical, have the Stone, and Gout, *&c.* It is a menſtruum diſſolving metals, excelling all other therein: For it diſſolveth all metals and minerals (excepting ſilver) and

almoſt

almoſt all ſtones (being rightly prepared) and reduceth them into excellent medicaments. It doth alſo many excellent things in mechanical arts.

Neither is it to be ſlighted in the kitchen, for with the help thereof are prepared divers pleaſant meats for the ſick as well as for thoſe that are in health, yea and better than with Vinegar, and other acid things: and it doth more in a ſmall quantity, than Vinegar in a great. But eſpecially it ſerves for thoſe Countries that have no Vinegar. It is uſed alſo inſtead of Verjuice, and the juice of Lymons. For being prepared after this way, it is bought at a cheaper rate than Vinegar or juice of Lymons. Neither is it corruptible as expreſſed juices are, but is bettered by age. Being mixed with Sugar it is an excellent ſauce for roaſt meat. It preſerves alſo divers kinds of Fruits for many years. It makes alſo Raiſins, and dryed Grapes to ſwell, ſo as to acquire their former magnitude again, which are good to refreſh a weak Stomach in many diſeaſes, and ſerves for the preparing of divers kinds of meats of Fleſh and Fiſh; but you muſt mix ſome water with the ſpirit, or elſe the Raiſins will contract too much acidity. This ſpirit doth eſpecially ſerve for making meats delightfully acid; for whatſoever things are prepared with it, as Chickens, Pigeons, Veale, *&c.* are of a more pleaſant taſte than thoſe which are prepared with Vinegar. Beef being macerated with it, becomes in a few dayes ſo tender, as if it had been a long time macerated with Vinegar. Such, and many more things can the Spirit of Salt do.

A diſtillation of Vegetable Oyles, whereby a greater quantity is acquired, than by that common way, by a Veſica.

As many Diſtillers as hitherto have been, have been ignorant of a better way to diſtill Oyles of Spices, Woods, and Seeds, than by a veſica or alembick, with a great quantity of water. And altho' they may alſo be made by retort, yet there is a great deal of care required, or elſe they contract an *Empyreuma*; wherefore that way, by a ſtill, is alwayes accounted the better, which way indeed is not to be ſlighted, if you diſtill Vegetables of a low price, and ſuch as be oleaginous; but not ſo in the diſtillation of Spices, and of other things that are of a greater value, as are Cinnamon, Mace, Saffron, *&c.* which cannot be diſtilled in a gourd ſtill without loſs, becauſe then there is required a great quantity of water, and by conſequence great, and large veſſels, to which ſomething adheres, wherefore we loſe almoſt half, which is not to be ſo much valued in vegetables that are oleaginous, as in Anniſeed, Fennel, and Caryoway-ſeed, *&c.* But the loſs made in the diſtilling of dryer and dearer vegetables, as of Cinnamon, *Lignum Rhodii*, *Caſſia*, is evident enough, and by conſequence not to be ſlighted. Neither can it be, that all things can be diſtilled that way, for a good quantity by coction acquireth a gummy tenaciouſneſs, which cannot aſcend with the water. But that this way for the future may be prevented, I will ſhew another way to diſtill the Oyles of Spices, and other precious things, which is done with ſpirit of ſalt, whereby all the Oyle is drawn forth without any loſs, the proceſs whereof is this, *viz.* Fill a gourd with Cinnamon or any other Wood, or Seed, upon which pour ſo much of the ſpirit of ſalt, as will be ſufficient to cover the wood, then place it with its Alembick in Sand, and give it fire by degrees that the ſpirit of ſalt may boyl, and all the Oyle will diſtill off with a little flegme; for the ſpirit of ſalt doth with its acrimony penetrate the wood, and freeth the Oyle that it may diſtill off the better and eaſier. And by this way the Oyle is not loſt by the addition of that great quantity of water in thoſe great and large veſſels, but is drawn in leſſer glaſs veſſels with the addition of a little moyſture. Diſtillation being finiſhed the ſpirit is poured off by inclination from the wood, being again uſeful for the ſame work. And if it hath contracted any impurity from the wood, it may be rectified: but the reſidue of the ſpirit which remains in the wood ye may recover, if that wood be caſt into the aforeſaid furnace upon burning coals, by which means it may come forth again pure, and clear: and by this means we loſe none of the ſpirit of Salt. And after this way by help of the ſpirit of Salt, are drawn forth Oyls of dearer Vegetables together with their Fruit, which cannot be done by a ſtill.

There are made alſo by means thereof Oyles of Gumms and Roſins, clear, and perſpicuous.

The clear Oyle of Maſtick, and Frankincenſe.

Take of Frankincenſe or Maſtick powdered ſmall, as much as will ſerve to fill the third part of a Retort (which muſt be coated) upon which pour a ſufficient quantity of ſpirit of Salt, taking heed that the Retort be not filled too full, or elſe the ſpirit when it boyles, flows over it, then place it in ſand, and give fire by degrees, and there will firſt come out ſome phlegme, after which a clear tranſparent oyle together with the ſpirit of ſalt, which muſt be kept by it ſelf, after this a certain yellow Oyle which muſt be received by it ſelf, and laſt of all there follows a red Oyle, which altho' it is not to be caſt away, yet it is very unlike to the firſt, ſerving for outward uſes, and to be mixed with Oyntments and Emplaſters, for it doth wonderfully conſolidate, and therefore good in new and old Wounds. The firſt being well rectified, is in its ſubtilty, and penetrating faculty not unlike to ſpirit of wine, and may profitably be uſed inwardly and outwardly, *viz.* in cold affects, but eſpecially in the ſtiffneſs of the Nerves, cauſed by cold humors, upon which follows a contraction; but then you muſt firſt rub the member contracted with a linnen cloath, that it may be well warmed, into which then the Oyle muſt be chafed with a warm hand. For it doth do wonders in ſuch like affects of the Nerves. *Thuſer French*

After the ſame manner may Oyles be made out of all gumms. The red, tenacious and ſtinking Oyles of Tartar, Harts-horn, Amber, *&c.* diſtilled after the common way by retort are alſo rectified with ſpirit of ſalt ſo as to become tranſparent and to loſe the *Empyreuma* contracted by diſtillation.

Now the cauſe of the blackneſs, and fetidneſs of theſe kind of Oyles, is a certain volatile ſalt which is to be found as well in Vegetables, as certain Animals, which is eaſily mixed with the Oyle, and makes it of a brown colour. For every volatile ſalt whether it be of Urine, Tartar, Amber, Harts-horn, and of other Vegetables and Animals, is of this condition and nature, as to exalt, and alter the colours of ſulphureous things, and that either

for the worſe or for the better: but for the moſt part it makes Oyles thick, black and ſtinking, as you may ſee in Amber, Harts-horn, and Tartar. The cauſe therefore of the blackneſs, and fetidneſs of theſe Oyles being known we may the more eaſily take heed thereof in diſtilling, and being contracted, correct them again by the help of ſpirit of Salt. For all volatile ſalt hath contrariety to any acid ſpirit, and on the other ſide, every acid ſpirit hath a contrariety with all volatile ſalts, that have the nature of ſalt of Tartar. For metals that are diſſolved with acid ſpirits are as well precipitated with ſpirit of Urine, or any volatile ſalt as with the liquor of ſalt of Tartar; which ſhall be more at large declared in the ſecond part.

The volatile ſalt therefore is by the mortifying acid ſpirits, as of Salt, Vitriol, Allom, Vinegar, *&c.* deprived of its volatility, and is fixed, by which means being debilitated it forſakes its aſſociate which was infected with blackneſs by it: it is neceſſary that we ſhould proceed after the ſame manner with theſe fetid Oyles, *viz.* as follows.

Take any fetid Oyle of Tartar, Amber, *&c.* with which fill the fourth part only of a glaſs Retort, and upon it pour by drops the ſpirit of ſalt; and it will begin to be hot, as it is uſed to be, when Aqua fortis is poured on ſalt of Tartar; wherefore the ſpirit is to be poured on it by little and little, and by drops for fear of breaking the glaſs: Now the ſigne of the mortification of the volatile ſalt is, when it ceaſeth to make a noiſe, and then no more is to be poured on, but ſet your Retort in ſand, & give fire to it by degrees, as is uſed to be done in the rectifying things of eaſie elevation: and firſt of all will go forth a certain ſtinking water, after which comes a tranſparent clear, and odoriferous Oyle, and after that a certain yellow, clear, and alſo well ſmelling Oyle, but not ſo as the firſt, wherefore each muſt be taken a part by changing the receivers. Now theſe Oyles become more grateful than thoſe fetid ones of the ſhops. For theſe Oyles retain their clearneſs, and fairneſs, the cauſe of their fetidneſs, and redneſs being taken away by the ſpirit of ſalt. In the bottom of the Retort remains the black volatile ſalt with the ſpirit of ſalt, from whence it may be ſublimed into an odoriferous ſalt reſembling ſalt armoniack in taſt. The ſpirit of ſalt is alſo deprived of its acidity, and coagulated by the volatile ſalt, and is like *tartarum vitriolatum*, appointed alſo for its uſes, as ſhall be ſpoken in the ſecond part, of the ſpirit of Urine.

After the ſame manner alſo are rectified other Oyles, which by length of time have contracted a clammineſs, as are Oyle of Cinnamon, Mace, Cloves, *&c.* with the ſpirit of Salt, if they be rectified by Retort, for then they acquire again both the ſame clearneſs, and goodneſs, as they had when they were newly diſtilled.

Here I muſt make mention of a certain error of Phyſitians, not only of ignorant Galeniſts but Spagyricks, committed in the preparations of ſome Chymical medicaments. For many have perſwaded themſelves that Oyle of Tartar, Harts-horn, *&c.* having loſt its ſtink, is a Medicine radically taking away all obſtructions; but this muſt be taken with a grain of ſalt. For ſome have rectified theſe kinds of Oyles by calcined Vitriol, and by that means have ſomewhat made them loſe their *Empyreuma*, but with all their Vertues; which others obſerving have conceived that the fetidneſs thereof is not to be taken away, becauſe the Vertue of them is thereby loſt, as if the Vertue conſiſted in the fetidneſs thereof; but that is a very great error, becauſe fetidneſs is an enemy to the heart and brain, and in it is no good. But this is granted, that they that take away the fetidneſs of thoſe Oyles mortifie the vertues of them. But thou ſayſt, How then muſt we proceed in taking away their fetidneſs without the loſs of the vertues? Muſt they be rectified by the ſpirit of ſalt? as even now thou taughteſt. R. No, for although I ſaid that Oyles might be clarified with ſpirit of ſalt, yet it doth not follow that my meaning was, that that clarification was the mending of them: This is only a way of clarification, whereby they become more grateful; and it is not to be ſlighted, a better being unknown. But how they are to be rectified from their fetidneſs and blackneſs, without the loſs of their Vertues, and to be made more noble, doth not belong to this place, becauſe it cannot be done by this Furnace: I ſhall refer the reader therefore to the †ſecond part, where it ſhall be ſhewed, how ſuch ſpirits are to be rectified without the loſs of their vertues, which being ſo prepared may well be accounted for the fourth Pillar of Phyſick. And theſe things I was willing at leaſt for information ſake to ſhew you, not to offend you, and that becauſe I was moved with pity, and compaſſion towards my neighbour.

† *pag 16*

The Quinteſſence of all Vegetables.

POur upon Spices, Seeds, Woods, Roots, Fruits, Flowers, *&c.* the Spirit of Wine well rectified, place them in digeſtion to be extracted, untill all the eſſence be extracted, with the Spirit of Wine; then upon this Spirit of Wine, being impregnated, pour the beſt Spirit of Salt; and being thus mixed together, place them in Balneo to digeſt, untill the Oyle be ſeparated, and ſwim above from the Spirit of Wine, then ſeparate it with a ſeparating glaſs, or diſtill off the Spirit of Wine in Balneo, and a clear Oyle will aſcend; for if the Spirit of Wine be not abſtracted, then that Oyle will be as red as blood; and it is the true quinteſſence of that vegetable, from whence by the Spirit of Wine it was extracted.

The Quinteſſence of all Metals and Minerals.

DIſſolve any metal (excepting Silver, which muſt be diſſolved in Aqua fortis) in the ſtrongeſt ſpirit of Salt, and draw off the flegme in Balneo; to that which remains pour the beſt rectified ſpirit of Wine, put it to digeſting, untill the Oyle be elevated to the top as red as blood, which is the tincture, and quinteſſence of that metal, being a moſt Precious treaſure in medicine.

Lond. pag 89.

A ſweet and red Oyle, of Metals and Minerals.

DIſſolve a Metal or Mineral in ſpirit of Salt, diſſolve alſo an equal weight of ſalt of Wine eſſentificated; mix theſe diſſolutions, and diſtill them by retort in a gradual heat, and there will come out an oyle ſweet, and as red as blood, together with the ſpirit of Salt; and ſometimes the neck of the retort and receiver will be coloured like a Peacocks tail with divers colours, and ſometimes with a golden colour.

And becauſe I would without any difference comprehend all Metals and Minerals under one certain general

general proceſs; let him that would make the eſſence of ſilver take the ſpirit of nitre, and proceed in all things as was ſpoken of the other metals. Concerning the uſe of theſe eſſences, I need not ſpeak much thereof; for to him that knows the preparation ſhall be diſcovered the uſe thereof. Concerning the corroſive oyles of metals and minerals, ſeeing they cannot be deſcribed by any one proceſs, it will be worth while to ſet down what is peculiar to each of them, as followeth. *Therefor Frenchpag 90*

The Oyle, or Liquor of Gold.

DIſſolve the calx of gold in the ſpirit of ſalt, (which muſt be very ſtrong, or elſe it cannot diſſolve it) but in defect of the ſtrongeſt ſpirit thereof, mix a little of the pureſt ſalt-peter; but that oyle is the beſt which is made with the ſpirit of ſalt alone. From the gold diſſolved abſtract half the ſolution, and there will remain a corroſive oyle, upon which pour the expreſſed juice of lemons, and the diſſolution will become green, and a few feces fall to the bottom, which may be reduced in melting. This being done, put this green liquor in Balneo, and draw off the flegme: that which remains take out, and put upon a marble in a cold moiſt place, and it will be reſolved into a red oyle, which may ſafely, and without danger be taken inwardly, curing thoſe that are hurt with Mercury. But eſpecially it is commended in old ulcers of the mouth, tongue, and throat, ariſing from the French pox, leproſy, ſcorbute, *&c.* where the oyl of other things cannot be ſo ſafely uſed. There is not a better medicine in the exulceration, and ſwelling of the glandules, in the ulcers of tongue and jaws, which doth ſooner mundify, and conſolidate. Neither yet muſt we neglect neceſſary purgings, and ſudorificks, for fear of a relapſe, the cauſe not being taken away.

Neither will there any danger follow, whether it be given inwardly, or uſed outwardly, as in the accuſtomed uſe of other medicaments, and gargariſms; for it may daily, and truly without all danger be uſed at leaſt three times with a wonderful admiration of a quick operation.

Oyle of Mars.

DIſſolve thin plates of Iron in rectified ſpirit of ſalt, take the ſolution, which is green, of a ſweet taſt, and ſmelling like fetid ſulphur; and filter it from that filthy and feculent reſidence: then in a glaſs gourd in ſand, abſtract all the humidity (*viz.* with a gentle fire) which will be as inſipid as rain-water, becauſe the iron by reaſon of its dryneſs, hath attracted all the acidity to it ſelf: but in the bottom will remain a maſs as red as blood, burning the tongue like fire: it takes away all proud fleſh of wounds, and that without all danger. It is to be kept in a glaſs cloſe ſtopt from the air, leſt it be reſolved into an oyle, which will be of a yellow colour. But he that deſires to have the oyle, may ſet it on a marble in a moiſt Cellar, and within a day it will be reſolved into an oyle, which will be in colour betwixt yellow and red: It is a moſt excellent ſecret in all corroding ulcers, fiſtulas, cancer, *&c.* being an incomparable conſolidator, and mundifyer. And it is not without profit mixed alſo with common water to waſh the moiſt, fetid ulcers of the leggs; which cauſe tumours, by being applyed warm like a bath, for it dryes, and heals ſuddenly, if withal Purges be adminiſtred. It cures alſo any ſcab. That red maſs (being yet unreſolved) being put on the oyle of ſand, or flints (of which in the ſecond part) makes a tree to grow in the ſpace of one or two hours, having root, trunk, and boughs: which being taken out, and dryed, in the teſt yields good gold, which that tree extracts from the earth, *i. e.* from the flints, or ſand. Thou mayſt if thou pleaſeſt, more accurately examine this matter.

Oyle of Venus.

SPirit of Salt doth not eaſily work upon Copper, unleſs it be firſt reduced into a calx, and that after this manner. Take plates of Copper made red hot in an open crucible, quench them in cold water, and they will cleave into red ſcales: then the remainders of the plates make red hot, and quench as before: do this ſo often, till thou haſt got a ſufficient quantity of the calx; which being dryed, and powdered, extract with the rectified ſpirit of ſalt, in ſand, until the ſpirit of ſalt be ſufficiently coloured with a green tincture, which you muſt decant, and filter; and then abſtract from it the ſuperfluous moiſture, that there may remain a green thick oyle, which is an excellent remedy for ulcers, eſpecially ſuch as are Venereal, being applyed outwardly.

Oyle of Jupiter *and* Saturn.

NEither are theſe two metals eaſily diſſolved in the ſpirit of ſalt, yet being filed, are diſſolved in the beſt rectified ſpirit of ſalt. But the operation is performed better with the flowers of theſe metals (the preparation whereof ſhall be hereafter taught.) Take therefore the flowers, upon which in a gourd glaſs pour the ſpirit of ſalt, and preſently the ſpirit will work upon them, eſpecially being ſet in a warm place; filter the yellow ſolution, and abſtract the humidity, until there remain a yellow heavy oyle, which is proper againſt putrid ulcers.

Oyle of Mercury.

NEither is this eaſily diſſolved with the ſpirit of ſalt: but being ſublimed with vitriol, and ſalt is eaſily diſſolved. Being diſſolved, it yields an oyle very corroſive, which muſt be uſed with diſcretion, wherefore it is not to be adminiſtred, unleſs it be where none of the other are to be had. For I ſaw a woman ſuddenly killed with this oyle, being applyed by a certain Chyrurgeon. But this oyle is not to be ſlighted in eating ulcers, tetter, *&c.* which are mortified by it. *See French p. 92*

Oyle of Antimony.

CRude Antimony that hath never undergone the fire, is hardly diſſolved in ſpirit of ſalt: alſo the *Regulus* thereof; but the *Regulus* being ſubtilly poudered, is more eaſily wrought upon, in caſe the ſpirit be ſufficiently rectified. *pag 35. 6.*

The *Vitrum* is more eaſily, but moſt eaſily of all the flowers are diſſolved, being ſuch as are made after our preſcription a little after ſet down. Neither is *Butyrum Antimonii* (being made out of ſublimed Mercury, and Antimony) any thing elſe but the *Regulus* of Antimony diſſolved with ſpirit of *French p. 88*

ſalt; for ſublimed Mercury being mixed with Antimony, feeling the heat of the fire, is forſaken by the corroſive ſpirits aſſociating themſelves with the Antimony, whence comes the thick Oyle; whileſt which is done the ſulphur of Antimony is joyned to the Quick-ſilver, and yields a Cinnabar, ſticking to the neck of the Retort; but the reſidue of the Mercury remains in the bottom with the *Caput Mortuum*, becauſe a little part thereof doth diſtill off: And if thou haſt skill thou mayſt recover the whole weight of the Mercury again.

And theſe things I was willing the rather to ſhew thee, becauſe many think this is the Oyle of Mercury, and therefore that white powder made thence by the pouring on of abundance of water they call *Mercurius vitæ*, with which there is no mixture at all of Mercury, for it is meer Regulus of Antimony diſſolved with ſpirit of Salt, which is again ſeparated, when the water is poured on the Antimonial butter; as is ſeen by experience; For that white pouder being dryed, and melted in a crucible yields partly a yellow Glaſs, and partly alſo a Regulus, but no Mercury at all.

Whence it doth neceſſarily follow that that thick oyle is nothing elſe but Antimony diſſolved in ſpirit of Salt. For the flowers of Antimony being mixed with ſpirit of Salt, make an oyle in all reſpects like to that butter which is made of Antimony, and ſublimated Mercury, which alſo is after the ſame manner by the affuſion of a good quantity of water precipitated into a white pouder, which is commonly called *Mercurius vitæ*: It is alſo by the ſame way turned into *Bezoardicum mineral*, viz. by abſtracting the ſpirit of Nitre, and it is nothing elſe but Diaphoretick Antimony.

For it is all one whether that Diaphoretick be made with ſpirit of Nitre, or with Nitre it ſelf, *viz.* corporeal, for theſe have the ſame vertues, although ſome are of opinion that that is to be preferred before the other; but the truth is, there is no difference. But let every one be free in his own judgment, for thoſe things which I have wrote, I have not Writ out of ambition, but to find out the truth.

Now again to our purpoſe, which is to ſhew an oyle of Antimony made with the ſpirit of ſalt.

Take a pound of the flowers of Antimony (of which a little after) upon which pour two pound of the beſt rectified ſpirit, mix them well together in a glaſs, and ſet them in ſand a day and night to diſſolve, then pour out that ſolution together with the flowers into a retort that is coated, which ſet in ſand, and firſt give a gentle fire, untill the flegme be come off, then follows a weak ſpirit with a little ſtronger fire, for the ſtronger ſpirits remain in the bottom with the Antimony: then give a ſtronger fire, and there will come forth an oyle like to the butter of Antimony made with ſublimed Mercury, and is appropriated to the ſame uſes, as follows.

The flowers of Antimony, White and Vomitive.

TAke of this butter as much as you pleaſe, upon which in a glaſs gourd, or any other large glaſs pour a great quantity of water until the white flowers will precipitate no more; then decant off the water from the flowers, which edulcorate with warm water, and dry with a gentle heat, and thou ſhalt have a white pouder.

The Doſe is, that 1. 2. 3. 8. 10. grains be macerated for the ſpace of a night in wine, which is to be drank in the morning, and it worketh upward and downward. But it is not to be given to children, thoſe that be old, and weak, but to thoſe that be ſtrong, and accuſtomed to vomiting. When at any time this infuſion is taken and doth not work, as ſometimes it falls out, but makes the Patient very ſick, he muſt provoke vomiting with his finger, or elſe it will not work, but make thoſe that have taken it to be ſick, and debilitated even to death. We muſt alſo in the over much working of theſe flowers drink a draught of warm Beer, or rather of warm Water, decocted with Chervil, or Parſly, and they will work more mildly. But let not him that is able to bear the operation thereof any way hinder it, for there is the greater hope of recovering his health thereby, for they do excellently purge choler, and evacuate flegme in the Stomack, being humors that will not yield to other Catharticks; they open obſtructions, reſiſt the putrefaction of the blood, the cauſes of many diſeaſes, ſuch as are Feavers, Head-aches, *&c.* they are good for them that are Leprous, Scorbutical, Melancholical, Hypochondriacal, infected with the French-Pox, and in the beginning of the Plague. In brief, they do work gallantly, and do many things.

After the taking of them, the Patient muſt ſtay in his bed or at leaſt not go forth of his houſe, for to avoid the aire, or otherwiſe they may be miſtruſted.

And becauſe of their violence they are feared, and hated, I ſhall in the fourth part of this Book for the ſake of the ſick ſet down ſuch as are milder, and ſafer, ſuch as ſhall work rather downward than upward, cauſing eaſie vomits, which alſo thou mayeſt give to children, and thoſe that are old without danger, yet ſome reſpect being had of the diſeaſe, and age.

The flowers of Antimony diaphoretical.

THE foreſaid flowers if they be caſt into melted Nitre, and be left a while in melting, are made fixt, ſo as to become Diaphoretical, and loſe their Cathartical Vertue. The acid water being ſeparated from the flowers, if it be evaporated, leaves behind the beſt ſpirit of ſalt, ſerving for the ſame or ſuch like uſes again.

Of the External uſe of the Corroſive Oyle of Antimony.

THis oyle hath been long uſed by Chirurgions, for they have with a feather applyed it to wounds almoſt uncurable, to ſeparate impurities, for the acceleration of the cure, that afterwards other medicaments being applyed may the better operate. But it is better if it be mixed, with ſpirit of Salt, for they are eaſily mixed and it is made more mild thereby, and the too great corroſive faculty thereof is mitigated. Neither is there any other beſides the ſpirit of Salt, with which this oyle can be mixed, unleſs it be the ſtrongeſt ſpirit of Nitre, for the weak ſpirit of Nitre precipitates the butter of Antimony, as you may ſee in the preparation of *Bezoardicum Minerale*. But the ſtrongeſt ſpirit of nitre diſſolving this butter, makes a red ſolution of wonderfull Vertue in Chymiſtry, of which we are not to treat in this place; and if this

this be drawn off again by diſtillation, it leaves behind the firſt time a fixed Antimony, and Diaphoretical, which otherwiſe muſt be drawn off twice, or thrice, *viz.* if it be weak, and not able to diſſolve the butter without precipitation.

Now this *Bezoardicum* is the beſt, and ſafeſt Diaphoretick in all diſeaſes that require ſweat, as in the plague, French pox, feavers, ſcorbute, leproſy, *&c.* if it be given from 6. 8. 10. to twenty grains in proper vehicles; it penetrates the whole body, and evacuates all evil humours by ſweat and urine.

The Oyl of Arſenic *and* Auripigmentum.

AS the ſpirit of ſalt doth not eaſily work upon Antimony by reaſon of the abundance of crude ſulphur, unleſs it be reduced into flowers, in the preparation whereof, ſome part of its ſulphur is burnt; ſo alſo *Arſenic* and *Auripigmentum* are hardly diſſolved with ſpirit of ſalt, unleſs they be reduced into flowers, and the ſpirit of ſalt be very ſtrong, which may be able to work upon it. Theſe may be diſtilled by retort like Antimony into a thick heavy oyl; which being uſed in cancrous eating ulcers, exceeds that of Antimony in mortifying, mundifying, and purging thoſe evils. After the ſame manner may corroſive oyls be made out of all the realgars being ordained for outward uſes.

French p. 88. Oyl of Lapis Calaminaris.

TAke of the beſt yellow or red *Lapis Calaminaris* very ſubtilly powdered, as much as you pleaſe, and pour upon it five or ſix times as much of rectified ſpirit of ſalt, mix and ſtir them well together, and do not leave them long unſtirred, but ever and anon ſhake the glaſs with the materials; and this do oftentimes, or elſe the *Lapis Calaminaris* will grow together into a very hard ſtone, which can be diſſolved no more, and is prevented by the aforeſaid often ſhaking: and when the ſpirit of ſalt will diſſolve no more thereof in *frigido*, ſet the glaſs in warm ſand ſo long, until the ſpirit be tinged with a moſt yellow colour, which then decant, and pour on freſh, and again ſet it in digeſtion to extract, and do not forget to ſhake the glaſs often. The ſolution being finiſhed filter it, and caſt away the reſidue of the *terra mortua*. Afterwards ſet the ſolution in ſand, and give fire, and almoſt three parts of the ſpirit of ſalt will go over inſipid, which is nothing but the flegme, although the ſpirit was never ſo well rectified; the reaſon whereof is the moſt dry nature of *lapis calaminaris*, to which the ſpirit of ſalt is very friendly, and therefore very hard to be ſeparated from it. For I never knew any mineral or metal (beſide *Zinck*) which exceeds *lapis calaminaris* in dryneſs. At laſt when no more flegm will go over, let all things cool; which being done, take out the glaſs, and thou ſhalt find a red thick oyl, as fat as oyl olive, and not very corroſive; for that ſpirit of ſalt being almoſt mortified with the *lapis calaminaris* is deprived of its acidity. This oyl is to be kept from the air; or elſe within a few dayes it attracts much air which it converts into water, and thereby becomes weakened.

This Oyl is of wonderful Vertue, being uſed as well inwardly as outwardly. And I wonder that in ſo long a time there hath been no body, who hath operated in *lapis calaminaris* and deſcribed the nature thereof, ſeeing it hath in it a golden ſulphur (of which thing in the fourth Part) for if the terreſtreity thereof were ſeparated from it artificially, pure gold would be manifeſted therein; now the greateſt part thereof is volatile, and immature, and cannot eaſily be reduced into a body in melting, wherefore hitherto that ſtone hath not been eſteemed of by Chymiſts, but to the wiſe was alwayes pretious, *&c.*

The uſe of the Oyl of Lapis Calaminaris.

IF it be given from 1. 2. 3. drops to ten, and fifteen with ſutable vehicles, it purgeth the dropſy, leproſy, gout, and other noxious fixed humors not yielding to vegetable Catharticks, of which more at large in the ſecond Part of the ſpirit of urine and ſalt of tartar. It ſerves outwardly for an excellent vulnerary balſome, the like to which can ſcarce be ſhewed, not only in reducing old corrupt wounds, but alſo in thoſe that are green, for it doth powerfully dry, mundify, and conſolidate.

It is alſo uſed in houſhold affairs, for birdlime being diſſolved in it, yields a certain tenacious matter ſerving to catch birds, mice, *&c.* about the houſe or in the field. For it is as permanent in the heat of the Sun, as in the cold of Winter, wherefore it may be uſed at any time of the year; all ſmall animals ſtick to it if they do but touch the matter.

A ligature or ſtring ſmeered therewith, and bound about any tree prevents the ſpiders from climbing up thereon, and other kinds of inſects that are noxious to the fruit; a thing worth taking notice of.

This oyl is not by the pouring on of water corrupted, neither is it precipitated, as that of Antimony: wherefore it is uſeful for many things. Common yellow ſulphur boyled in it, *viz.* in a ſtrong fire, ſo as to be diſſolved in it, ſwims upon it like fat, is thereby purified and made as tranſparent as yellow pellucid glaſs, and a better medicine than thoſe common flowers of ſulphur: it ſerves alſo for other uſes, all which to relate here it would be too tedious.

This oyl being mixed with clean ſand, and diſtilled by retort in a fire that is very ſtrong (otherwiſe the ſpirit of ſalt will not leave the *lapis calaminaris*) yields a moſt fiery ſpirit, the *lapis calaminaris* remaining in the bottom of the retort.

This ſpirit is ſo ſtrong, that it can ſcarce be kept; it diſſolves all metals, and all minerals (excepting ſilver and ſulphur) wherefore by the help thereof many excellent medicaments are made, which cannot be made with the common ſpirit though never ſo well rectified, which although it be often rectified, yet it is not without flegm, which cannot be ſeparated from it by the power of rectification, ſo well as with *lapis calaminaris*.

This ſpirit doth perform many things in medicine, & alchymy, as alſo in other arts, as you may eaſily conjecture; but here is not opportunity to ſpeak more of theſe things, yet for the ſake of the ſick I ſhall add one thing, to which few things are to be compared; the plain & ſhort proceſs whereof I would not have thee be offended at. And it is this, *viz.* mix this ſpirit with the beſt rectifyed ſpirit of wine, digeſt this mixture ſome while, and the ſpirit of ſalt will ſeparate the ſpirit of wine, and will make the oyl of wine ſwim on the top, the volatile ſalt being mortified: and this oyl is a moſt incomparable cordial, eſpecially if with the ſaid ſpirit of wine, ſpices have firſt been extracted, and with the ſaid ſpirit of ſalt, gold hath been diſſolved. For then in the digeſtion of this mixture, the oyl of wine being ſeparated, attracts the eſſence of the cordial ſpecies, and of other ve-

getables, being extracted before with the ſpirit of wine, as alſo the tincture of gold, and ſo by conſequence a moſt efficacious incomparable and univerſal medicine for all diſeaſes, fortifying the *Humidum radicale*, that it may be able to overcome its enemies; for which let praiſe and glory be given to the immortal God for ever who hath revealed to us ſo great ſecrets.

Of the Extrinſecal uſe of the ſpirit of Salt in the Kitchen.

I Said before that inſtead of Vinegar, and verjuice it may be uſed, as alſo inſtead of the juice of Limons, now it remains that I ſhew you how it is to be uſed, and that indeed as well for the ſake of the healthy as the ſick.

Let him therefore that will dreſs a pullet, pigeons, veal, *&c.* in the firſt place put a ſufficient quantity of ſpices, of water, and butter, and then as he pleaſeth a greater, or leſſer quantity of ſpirit of ſalt: and by this means fleſhes are ſooner made ready being boyled, then that common way; an old hen though the fleſh thereof be old is made as tender as a chicken by the addition of this ſpirit: but he that will uſe it inſtead of the juice of Limons with roſt meat, muſt put into it the pill of Limons for preſervation ſake, becauſe it preſerves it. It is uſed inſtead of verjuice by it ſelf alone, or mixed with a little ſugar, if it be too acid.

He that will ſtew beef, and make it as tender as kid, muſt firſt diſſolve in it tartar and a little ſalt before he wets the fleſh therewith, and the fleſh will not only be preſerved but made tender thereby: but to keep fleſh a long time you muſt mix ſome water therewith, and with weights preſs down the fleſh, that it may be covered with the pickle: for by this means fleſh may be preſerved a great while.

After the ſame manner may all kinds of garden fruits be preſerved, as cucumbers, purſlain, fennel, broom, German capers, *&c.* and indeed better than in vinegar. Alſo flowers, and hearbs may a long while be preſerved by the help thereof, ſo that you may have a roſe all the winter.

It preſerves alſo wine, if a little be mixed therewith. A little thereof being mixed with milk precipitates the cheeſe, which if it be rightly made is never corrupted, being like to ſuch cheeſe as they call *Parmeſan*. The whey of that milk diſſolves Iron, and cures any ſcab being waſhed therewith.

With the help of ſpirit of ſalt is made with honey, and ſugar a moſt pleaſant drink, not unlike to wine. There is made alſo of certain fruits with the ſpirit of ſalt a very good vinegar like to the Rheniſh vinegar. Such and many more things, which I will not now divulge, may be done with ſpirit of ſalt.

And thus have I in ſome meaſure taught the uſe of the ſpirit of ſalt, which I would not have you take as if I had revealed all things; for, brevities ſake, as alſo for ſome other reaſons I have ſilently paſſed over many things. Neither do I know all things my ſelf: but thoſe things, which I do know, I have ſo far declared that others may from thence have hints of ſeeking further. He that would deſcribe all, and every power and vertue thereof, had need to write a whole volum, the which is not my purpoſe at this time to do, but may perhaps be done another time. There ſhall alſo be ſhewed in the ſecond part of this book, ſome ſecrets which may be prepared by the help of this ſpirit: as how it may be dulcified to extract the tincture of gold, and of other metals, leaving a white body, which tincture is a medicine not to be ſlighted. Wherefore now ſeeing it is manifeſt how great things this ſpirit can do, every one will deſire a good quantity for his houſhold uſes, eſpecially ſeeing moſt excellent ſpirits may be made after an eaſie and ſhort way.

How an acid ſpirit, or vinegar may be diſtilled out of all vegetables, as hearbs, woods, roots, ſeeds, &c.

FIrſt put a few living coals into the furnace, then put upon them the wood that is to be diſtilled, that it may be burnt: out of which whilſt it is burning goes forth the acid ſpirit thereof into the receiver, where being condenſed it falls down into another receiver, reſembling almoſt common vinegar in its ſmell, wherefore alſo it is called the *vinegar of woods*.

And after this manner you may draw forth an acid ſpirit out of any wood, or vegetable, and that in a great quantity without coſts, becauſe the wood to be diſtilled is put but upon a very few living coals, and upon that another, for one kindles the other; and this ſpirit requires no more charges than of the wood to be diſtilled; which is a great difference betwixt this, and the common way of diſtilling, where beſides retorts, is required another fire; and out of a great retort ſcarce a pound of ſpirit is drawn in the ſpace of five or ſix hours; whereas in ours in the ſpace of one day, and that without any coſt or labor may be extracted twenty or thirty pound, becauſe the wood is immediately to be caſt into the fire to be diſtilled, and that not in pieces, but whole. Now this ſpirit (being rectified) may commodiouſly be uſed in divers Chymical operations, for it doth eaſily diſſolve animal ſtones, as the eyes of Crabs, the ſtones of Perches, and Carps, Corals alſo and Pearl, *&c.* as doth vinegar of wine. By means thereof alſo are diſſolved the glaſſes of metals, as of tin, lead, Antimony, and are extracted, and reduced into ſweet oyles.

This vinegar being taken inwardly of it ſelf doth cauſe ſweat wonderfully, wherefore it is good in many diſeaſes, eſpecially that which is made of Oak, Box; Guaiacum, Juniper, and other heavy woods; for by how much the heavier the woods are, by ſo much the more acid ſpirit do they yield.

Being uſed outwardly it mundifies ulcers, wounds, conſolidates, extinguiſheth, and mitigates inflammations cauſed by fire, cures the ſcab, but eſpecially the decoction being made of its own wood in the ſame. Being mixed with warm water for a bath for the lower part of the body, it cures occult diſeaſes of women; as alſo malignant ulcers of the leggs,

This ſpirit therefore deſerves ſome place in the ſhops, *i. e.* it is unjuſtly rejected in the ſhops, ſeeing it is eaſie to be made. In diſtilling of wormwood and other vegetables, there remaines in the bottom of the furnace aſhes, which being extracted with warm water yields a ſalt by decoction, which being again diſſolved in its own ſpirit or vinegar, and filtred, doth by the evaporation of the flegm, being placed in a cold place paſs into a Cryſtalline ſalt, which is of a pleaſant taſt, not like unto a *lixivium*, nor unto other ſalts that are diſſolved in the air. This ſalt is alſo more efficacious (being reduced into Cryſtals by its proper Spirit) than that which is made by the help of ſulphur, or Aqua fortis, and oyl of Vitriol, and otherways which Chymiſts, and Apothecaries uſe.

The

The ſpirit of paper and linnen cloath.

Pieces of linnen cloth gathered, and got from Sempſters being caſt into the furnace upon living coals, yield a moſt acid ſpirit, which tingeth the nailes, skin, & hair with a yellow colour, reſtores members deſtroyed with cold, is good in a gangrene, and eryſipelas if linen clothes wet in the ſame be applyed thereto, *&c.* The ſame doth ſpirit made of paper, *viz.* of the pieces thereof.

The ſpirit of ſilk.

After the ſame manner is there a ſpirit made of pieces of ſilk, which is not ſo ſharp as that which is made of linnen and paper, neither doth it tinge the Skin, but is moſt excellent in wounds as well old as green, and it makes the Skin beautiful.

The ſpirit of mans hair, and of other animals, as alſo of horns.

Out of horns alſo, and hair is made a ſpirit, but moſt fetid, wherefore it is not ſo uſeful, although otherwiſe it may ſerve for divers arts: being rectified it comes clear and to be of the odour of the ſpirit of urine. It diſſolves common ſulphur, and yields a water, that cures the ſcab in a very ſhort time.

Now for this buſineſs, ſhreds of woollen cloth undyed may ſerve, being caſt in a good quantity into the furnace. Pieces of cloath dipt in this ſpirit and hanged in vineyards, and fields, keep out Deer and Swine from coming in, becauſe they are afraid of the ſmell of that ſpirit, as of an huntſman that waits to catch them.

The ſpirit of vinegar, honey, and ſugar.

He that will diſtil liquid things, muſt caſt red hot coals into them, as for example into vinegar in the furnace, or if it be honey, or ſugar, let them firſt be diſſolved in water, by which means they will be drank up by the coals, which being therewith impregnated, muſt afterwards at ſeveral times be caſt into the furnace, and be burnt; and whilſt the coals are burning, that which is incombuſtible comes forth. And by this means you may diſtil liquid things in a great quantity.

Vinegar which is diſtilled this way, is of the ſame nature, as that which is diſtilled in cloſe veſſels.

But honey and ſugar that are diſtilled after this manner, are a little altered, and acquire other vertues: but how they ſhall be diſtilled without the loſs of their volatile ſpirit ſhall be taught in the ſecond Part. Alſo after this manner may all liquid things being drunk up by living coals be diſtilled.

Of the uſe of diſtilled vinegar many things might be ſaid, but becauſe the Books of all the Chymiſts treat abundantly thereof, I account it needleſs to repeat what they have writ. Yet this is worth taking notice of, that the ſharpeſt vinegar hath a great affinity with ſome metals, which may be extracted by the help thereof; alſo diſſolved, and reduced into medicaments; yea, many things may be made with the help thereof, as the books of all the Chymiſts teſtify.

But there is yet another vinegar, of which there is often mention made in the books of Philoſophers, by the help whereof, many wonderful things are performed in the ſolution of metals, the name whereof the ancients have been ſilent in; of which I do not here treat, becauſe it cannot be made by this furnace; but I ſhall treat of it in another part; yet ſo that I incur not the Curſe of the Philoſophers.

How ſpirits may be made out of the ſalt of tartar, vitriolated tartar, the ſpirit of ſalt tartarizated, and of other ſuch like fixed ſalts.

As many Chymiſts as there hath been, almoſt all have been of the opinion that a ſpirit cannot be drawn out of ſalt of tartar, and other fixed ſalts. For experience hath taught that by retort little or no ſpirit can be drawn from thence, as I had often experience of before the invention of this furnace: the reaſon of which thing was the admixtion of ſand, earth, bole, pouder of tiles, *&c.* for to prevent the flowing of the ſalt of tartar, being by this means diſperſed. But this is done through the ignorance of Authors, who have been ignorant of the properties of ſalt of tartar. For a ſtony matter, as ſand, flint, bole, *&c.* being mixed with ſalt of tartar, feeling the heat of the fire, and being made red with the ſame, is joyned to it moſt cloſely, ſo as no ſpirit can be drawn from thence, but become a moſt hard ſtone. For ſand, and ſuch things that are like to it, have ſo great an affinity with the ſalt of tartar, that being once united can ſcarce ever be ſeparated. Yet it may be made by Art by the addition of pure ſand, or flint, becauſe the whole ſubſtance of the ſalt of tartar may be turned into a ſpirit in the ſpace of one or two hours, as ſhall be taught in the ſecond part, and it excells all other medicaments in vertue, in curing the ſtone, and gout. And if by the regiment of art there be left any *Caput Mortuum* in the diſtillation, it hath, being diſſolved in the air, a power to putrify metals being prepared, and mixed with it, in the ſpace of few hours, ſo as to make them become black, and to grow up like trees with their roots, trunks, and boughs, which by how much the longer they are ſo left, become the better. Of calx of lead being ſubtilized, and of ſalt of tartar may be made a *ſpiritus gradatorius* of wonderful vertues as well in Medicine as Alchymy. There is made of the *Caput Mortuum, per deliquium* a green liquor which doth wonderful things; whence it is proved, *That Saturn is not the loweſt of the Planets*; enough to the wiſe.

And ſo is the Lac Virginis, and the Philoſophical Sanguis Draconis made.

Sometimes there is found a certain earth, or bole, which hath no affinity with tartar, which being mixed with ſalt of tartar yields a ſpirit, but very little. But in this furnace may all fixed things be elevated, becauſe the ſpecies not being included in it, but diſperſed, being caſt upon the fire, are from the fire elevated through the aire, and are being refrigerated in the recipients again condenſed, which cannot be ſo well done by a cloſe retort.

He therefore that will make the ſpirit of the ſalt of tartar, need do nothing elſe than to caſt the calcined tartar into the fire, and it will wholly come over in a ſpirit: but then there are required glaſs recipients, becauſe thoſe that are earthen cannot retain it.

And this is the way whereby moſt fixed ſalts are diſtilled into a ſpirit by the firſt furnace. In the ſecond furnace (*viz.* in the furnace of the ſecond Part) it may be done better, and eaſier, where together with the preparation ſhall be taught the uſe thereof.

The ſpirits, flowers, and ſalts of Minerals and ſtones.

BY this way ſpirits may be raiſed from any mineral or ſtone, and that without the addition of any other thing: yet ſo as that the minerals, and ſtones, as flints, Cryſtal, talk, *lapis calaminaris*, Marcaſite, Antimony, being ground be with an Iron ladle caſt upon the coals, and there will ariſe together with a certain acid ſpirit, ſome ſalt and flowers, which are to be waſhed off from the recipients, and filtred, and the flowers will remain in *Charta bibula*, or filter for the water together with the ſpirit, and the ſalt paſſeth through the filter, all which may be ſeparated, rectified and be kept by themſelves for their proper uſes. Now this you muſt know, that you muſt chooſe ſuch minerals which have not been touched by the fire, if you deſire to have their ſpirit.

How minerals, and metals may be reduced into flowers, and of their vertues.

Hitherto to the flowers of metals, and minerals have not been in uſe, excepting the flowers of Antimony, and ſulphur, which are eaſily ſublimed: for Chymiſts have not dared to attempt the ſublimation of other metals, and fixed minerals, being content with the ſolution of them with Aqua fortis, and corroſive waters, precipitating them with the liquor of ſalt of tartar, and afterward edulcorating, and drying them; and being ſo prepared they have called them their Flowers: but by Flowers I underſtand the ſame matter which is by the help of fire without the addition of any other thing ſublimed, and turned into a moſt ſubtile pouder, not to be perceived by the teeth or eyes, which indeed is (in my judgment) to be accounted for the true flowers; when as the flowers which others make are more corporeal, and cannot be ſo well edulcorated, but retain ſome ſaltneſs in them, as may be perceived by the increaſe of their weight, and therefore hurtful to the eyes, and other parts.

But our flowers being by the force of the fire ſublimed by themſelves, are not only without ſaltneſs, but are alſo ſo ſubtile that being taken inwardly preſently operate, and put forth their powers, *viz.* according to the pleaſure of the Phyſitian. Neither is their preparation ſo coſtly as the others.

Metals alſo, and minerals are maturated, and amended in their ſublimation, that they may be the more ſafely taken; but in other preparations they are rather deſtroyed, and corrupted, as experience witneſſeth: Now how theſe kind of flowers are to be made I ſhall now teach, and indeed of each metal by it ſelf, whereby the artiſt in the preparation cannot erre, and firſt thus.

Of Gold and Silver.

GOld and ſilver can hardly be brought into flowers, becauſe many are of opinion, that nothing comes from them in the fire, eſpecially from Gold, although it ſhould be left there for ever: which although it be true, *viz.* that nothing comes from gold in the fire, although it ſhould remain there a long time, and from ſilver but a little except it have copper or any other metal mixed, which yet vapours away but by little and little.

Which I ſay although it be ſo, yet they being broken and ſubtilized and ſcattered upon coals, and ſo diſperſed, may by the force of the fire and help of the air be ſublimed, and reduced into flowers.

Now ſeeing the aforeſaid metals are dear, and of a great price, and the furnace with its recipients large, I would not that any one ſhould caſt them in, eſpecially gold, becauſe he cannot recover them all; but I ſhall to thoſe that deſire to make theſe flowers ſhew another way in the ſecond part, whereby they may make them without the loſs of the metal; to which I refer the reader. For this furnace ſerves for the ſubliming of metals, and minerals, which are not ſo pretious, the looſing of part whereof is not ſo much regarded. And thus much is ſaid to ſhew that gold, and ſilver, although fixed, may be ſublimed. Now other metals may more eaſily be ſublimed, yet one more eaſily than another, neither need they any other preparation but beating ſmall, before they be caſt into the fire.

Flowers of Iron and Copper.

TAke of the filings of Iron or Copper, as much as you pleaſe, caſt them with an Iron laddle upon burning coals, *viz.* ſcatteringly, and there will ariſe from Iron a red vapour, but from Copper a green, and will be ſublimed into the ſublimatory veſſels. As the fire abates it muſt be renewed with freſh coales, and the caſting in of theſe filings be continued, until you have got a ſufficient quantity of flowers, and then you may let all cool. This being done take off the ſublimatory veſſels, take out the flowers, and keep them, for they are very good if they be mixed with unguents, and emplaſters: and being uſed inwardly cauſe vomiting; therefore they are better in Chirurgery, where ſcarce any thing is to be compared to them. Copper being diſſolved in ſpirit of ſalt, and precipitated with oyl of vitriol, edulcorated, dryed, and ſublimed, yields flowers, which being in the air reſolved into a green balſom, is moſt uſeful in wounds and old putrid ulcers, and is a moſt pretious treaſure.

Flowers of Lead and Tin.

YOu need not reduce theſe metals into ſmall crums, it is ſufficient if they be caſt in piece by piece, but then you muſt under the grate put an earthen platter glazed, and filled with water, to gather that which flows down melted, which is to be taken out, and caſt again into the fire, and this ſo often until all the metal be turned into flowers, which afterwards are again, the veſſels being cold, to be taken out, as hath been ſaid of the flowers of *Mars* and *Venus*. And theſe flowers are moſt excellent being mixed with plaiſters and oyntments in old and green wounds, for they have a greater power to dry, than metals calcined, as experience can teſtifie.

Of Mercury.

THis is eaſily reduced into flowers, becauſe it is very volatile, but not for the aforeſaid reaſon, becauſe it leapes in the fire, and ſeeks to deſcend.

And

And if you deſire to have the flowers thereof, mix it firſt with ſulphur that you may pulverize it, and caſt it in mortified. And if you caſt into a red hot crucible ſet in the furnace, a little quick Mercury, *viz.* by times with a ladle, preſently it will fly out, and ſome part thereof will be reſolved into an acid water, which is to be preferred before the flowers in my judgment; but the reſt of the Mercury drops into the receiver. But here are required glaſs veſſels, becauſe the aforeſaid water is loſt in earthen. And this water without doubt doth ſomething in Alchymy: It is alſo good being applyed outwardly, in the ſcab, and venereal ulcers.

The flowers of Zinck.

IT is a wonderful metal, and is found in the ſpagyrical anatomy to be meer ſulphur, golden, and immature. Being put upon burning coals doth ſuddenly fly away wholly; it is inflamed alſo, and partly burns like common ſulphur, with a flame of another colour, *viz.* golden purple: and yields moſt gallant white, and light flowers.

The uſe.

BEing given from 4, 5, 6, grains to 12, they provoke ſweat wonderfully, and ſometimes vomit, and ſtools, according to the offending matter. The vertues thereof being externally uſed are alſo wonderful, for there are not found better flowers, for they do not only ſpeedily conſolidate freſh wounds, but alſo old, ſuch as always drop water, in which caſes they excell all other medicaments. For they are of ſuch dryneſs, which hath joyned with it a conſolidating vertue, as that they do even things incredible. They may be uſed divers ways, as to be ſtrewed by themſelves, putting over them a ſtiptick plaiſter, or being brought into an unguent with honey to be put into wounds; which unguents in deep wounds may be boyled to a hardneſs for the making of ſmall ſuppoſitories, which are to be put into the wounds, which muſt afterwards be covered with ſome plaiſter, and preſerved from the air. Being applyed after this manner they cure fundamentally, being mixed with plaiſters alſo they do wonderful things.

If they be mixed with roſe, or rain water, ſo as to be united together, and afterwards ſome of this mixture be ſometimes every day dropt into red eyes that water, yielding not to other ophthalmicks, do reſtore, and heal them.

Theſe flowers being taken up in lint and ſtrewed upon thoſe places of Children that are galled with their urin (thoſe places being firſt waſhed with water) heal them quickly. They heal alſo quickly any excoriation which is contracted by lying long in any ſickneſs, and is very painful, if they be ſtrewed thereon.

Theſe flowers alſo are more eaſily diſſolved in coroſive waters, than other metals, and minerals, neither doth the ſpirit leave them in the fire, but an inſipid phlegm only diſtills off, leaving a fat and thick oyl, as is above ſaid concerning the *lapis calaminaris*, being ordained for the ſame uſes, but more efficacious then that. Which ſpirit if it be by the violence of fire driven forth, is of ſo great ſtrength, that it can ſcarce be kept. And not only ſpirit of ſalt, but alſo Aqua fortis, and Regia may after this manner be exalted, ſo as to be able to do wonderful things in the ſeparation of metals; but here is not place for theſe things, they ſhall be ſpoken of in the fourth part.

But you need not make flowers for this work, becauſe crude Zinck doth the ſame, although the flowers do it ſomething better: whence it appears that a metal contracts a higher degree of dryneſs in ſublimation.

Flowers of Antimony.

THere is no difficulty to make the flowers of Antimony, for Chymiſts have a long time made uſe of them, and becauſe their preparation was tedious, they were not ſold at a low rate.

Wherefore there was no body willing to attempt any thing elſe in them, becauſe they were uſed only for vomiting; the doſe whereof was from 1. 2. 3. 4. grains to 8. and 10. in affects of the ſtomack and of the head, as alſo in feavers, plague, morbus gallicus, *&c.* Neither is it a wonder if Chymiſts tryed no farther in them, for we ſee that there are found men in theſe days who perſwade themſelves that there is nothing which was not found out by the learned ancients, can be found out in theſe days, and if there were any thing to be yet found out it was found out already by them. But this opinion truly is very fooliſh, as if God gave all things to the ancients, and reſerved nothing for them that ſhould come after. Neither indeed do they underſtand nature in their operations, which works inceſſantly, and is not wearied in her labours, *&c.* But however it is manifeſt that God hath revealed things in theſe times which were hid from them of old, and he will not ceaſe to do the ſame even to the end of the world.

But to return to our purpoſe again, which is to ſhew an eaſier way of making the flowers of Antimony, whereby a greater quantity may be had, as alſo that they may ſerve for other uſes.

Take of crude Antimony poudered as much as you pleaſe, and firſt make your furnace red hot, then caſt in at once a pound of Antimony, or thereabouts, *viz.* ſcatteringly upon the coals; and preſently it will flow, & being mixed with the coals by the force of the fire will be ſublimed through the air into the receivers like a cloud, which will there be coagulated into white flowers. Note, that when the firſt coals are burnt up, more muſt be put in to continue the ſublimation, and thoſe muſt be firſt kindled before they are put in, leſt the flowers be by the duſt of the coals ariſing together with them diſcoloured, and contract thence a gray colour: but it matters not if you will not uſe them by themſelves to provoke vomiting, becauſe there is no danger thereby, for that colour comes only from the ſmoake of the coals, wherefore you need not be afraid of them. But let him that diſlikes this colour, firſt kindle the coals before he put them into the furnace, and then he ſhall have white flowers. Alſo you muſt not ſhut the middle hole through which the coals, and Antimony are caſt in, that thereby the fire may burn the more freely: for elſe the flowers of the ſuperior pots will be yellow and red, by reaſon of the ſulphur of the Antimony, which is ſublimed higher than the regulus. Now you may by this way make a pound of the flowers with 3. 4. or 5. pound of coals. It is a little that goes away from the Antimony, *viz.* the combuſtible ſulphur, which is burnt, all the reſt going into flowers. You muſt have a care to provide a ſufficient quantity of ſubliming pots by reaſon that a large ſpace is required for the ſublimation of the flowers.

The flowers that are prepared after this way, are ſold at a lower rate, ſo that one pound thereof is cheaper, than half an ounce of thoſe that are made after the other manner. Alſo they are ſafer, as being made with an open free flame of the fire, for they do not provoke vomit ſo vehemently; moreover the flowers of the lower pots are not vomiting, but diaphoretical, as if they had been prepared with nitre, for thus they are corrected by the fire: And by this way at one and the ſame operation divers flowers of divers operations may be made, for the flowers of the lower pots are diaphoretical, of the middle a little vomitive, but of the uppermoſt vehemently vomitive. For by how much the more they have endured the fire, by ſo much the better are they corrected; from whence the diverſity of their power proceeds. Wherefore each of them are to be kept by themſelves, and the uppermoſt for plaiſters or butter, or oyl, and thoſe to be made ſweet or corroſive thereby; The middle for purging, and vomiting, but the lowermoſt for ſweat, being more excellent than *Bezoardicum Minerale*, or *Antimonium Diaphoreticum* made with nitre. Truly I do not believe that there is an eaſier way of making vomiting, and diaphoretical flowers, than ours. Now for the uſe of them, you muſt know that thoſe that are vomitive are to be adminiſtred to thoſe that are ſtrong, and accuſtomed to vomit: but to Children, and old Men with diſcretion, as hath been ſaid above of the butter of Antimony: but thoſe that are diaphoretical may be given without danger to Old and Young, to thoſe that are in health, and to the ſick; in any affliction that requires ſweat; as in the Plague, Morbus Gallicus, Scorbute, Leproſy, Feavers, *&c.* The Doſe of them is from 3, 6, 9, 12, grains to 24. with proper vehicles to ſweat in the bed; for they do expel as well by ſweat, as by urine, all evil humours. And becauſe they that are vomitive are in a greater quantity than thoſe that are diaphoretical, and not ſo neceſſary as theſe, and there may be many more doſes out of them; it is neceſſary to ſhew you how thoſe that are vomitive may be turned into diaphoretical; and that may be done three wayes; the two former whereof I have before ſhewed concerning the butter of Antimony made of flowers with ſpirit of ſalt, the third is this, *viz.* put the flowers in a crucible covered, (without luting) leſt any thing fall into it, ſo ſet them by themſelves in a gentle fire, that they melt not, but be made only darkly glow for the ſpace of ſome hours; then let them cool, for they are become fixed aud diaphoretical. Although they had before contracted ſome yellowneſs or aſh-colour, yet by this means they are made white, fixed, and diaphoretical. Alſo theſe flowers are uſed in ſtiptick plaiſters by reaſon of their dry nature, with which they are endued.

Alſo they are melted into a yellow tranſparent glaſs, neither is there taught an eaſier way of reducing Antimony by it ſelf into a yellow tranſparent glaſs, where crude Antimony is firſt ſublimed, and being ſublimed is melted into glaſs.

This ſublimation ſerves inſtead of calcination, by the help whereof 20 pound are more eaſily ſublimed, than by the help of the other one pound is brought into calx.

Neither is there here any danger of the aſcending fumes, becauſe when the Antimony is caſt into the fire you may be gone, which is a ſafe, and eaſy calcination, whereas the common way requires the continual preſence of the artiſt ſtirring the matter, who alſo takes out the matter when it is once grown together, and grinds it again; by which means he hath much to do, before the matter come to a whiteneſs; but by our way, the matter is at the firſt time made ſufficiently white, and more than by that common way of calcination and agitation. I ſuppoſe therefore that I have ſhewed to him that will make glaſs of Antimony, the beſt, and hitherto unknown way; which being taught, I hope there is no man will hereafter like a fool go that tedious way of the Antients, but rather follow my ſteps. For by this way may any Phyſitian, moſt eaſily be able to prepare for himſelf vomitive and diaphoretical flowers, and alſo glaſs of Antimony *per ſe*.

Of thoſe Flowers may be made oyls both ſweet and corroſive, and other medicaments, as hath been above ſaid of the ſpirit of ſalt, and ſhall afterwards be ſpoken in the Second Part.

Let him that will make Flowers of the Regulus, fairer than thoſe which are made of crude Antimony, caſt it being poudered into the fire, and in all things proceed as hath been ſaid, and he ſhall have them, *&c.* for they are eaſily ſublimed. Now, how the regulus is to be made after a compendious manner, you ſhall find in the Fourth Part. The ſcoriæ alſo are ſublimed, ſo as nothing is loſt. But he that will make Flowers that ſhall be diſſolved in the aire into a liquor muſt add ſome calcined tartar, or ſome other fixt vegetable ſalt, and he ſhall have Flowers that will be diſſolved in any liquor: but he that will make red Flowers as well thoſe that are diaphoretical, as thoſe that are purging, muſt mix iron, and he ſhall have Flowers like to Cinnabar: Let him that deſires green, mix copper, if purple, *lapis calaminaris*.

And thus out of any mineral may be made Flowers whether it be fixed, or volatile; for it is forced to fly on high being caſt into the fire. And theſe may be uſed diverſly in Chyrurgery, in plaiſters and unguents; for they dry, and aſtring potently, eſpecially thoſe that are made of *lapis calaminaris*. Neither are they to be ſlighted that are made of the golden, and ſilver marcaſite. Thoſe that are made of arſenic & auripigmentum, are poyſonous, but are uſeful for Painters. Arſenic & auripigmentum being calcined with nitre, and then ſublimed, yield Flowers that are ſafely to be taken inwardly, expelling all poyſons by ſweat and ſtool: For they are corrected two wayes, *viz.* firſt by the nitre, ſecondly by the fire in the ſubliming: they are not therefore to be feared, becauſe that Arſnick was poyſonous before the preparation thereof. For by how much the greater poyſon it was before preparation, ſo much the greater medicine afterwards.

The Flowers of ſulphur are taught in the Second Part, although they may alſo be made by this furnace, *viz.* the natures and properties thereof being known by an expert Artiſt, or otherwiſe it is burnt.

So alſo ſtones being prepared are brought into Flowers, and many other things, of which we need not ſay any thing, only let him that pleaſeth make tryal thereof. *Lemnich p. 231.*

And now I ſuppoſe I have made plain, and ſhewed you clearly how diſtillation is to be made in this our firſt furnace; wherefore I will now end.

He

He therefore that underſtands and knows the fabrick of the furnace (which he may underſtand by the delineation thereof) and the uſe thereof, will not deny but that I have done a good work, and will not diſapprove of my labour.

And this is the beſt way of diſtilling, and ſubliming incombuſtible things. In the Second Part you ſhall find another furnace in which are diſtilled combuſtible things, as alſo moſt ſubtil ſpirits, *&c.* The firſt furnace ſerves alſo for other uſes, as the ſeparation of metals; of the pure from the impure; for the making of the central ſalt, and of the *humidum radicale* of them all. But becauſe it cannot be done after the aforeſaid way, by which things are caſt into the fire to get their flowers, and ſpirits, but after a certain ſecret Philoſophical manner, by the power of a certain ſecret fire, hitherto concealed by the Philoſophers (neither ſhall I proſtrate that ſecret before all); It is ſufficient that I have given a hint of it for further enquiry, and have ſhewed the way to other things.

FINIS.

THE

SECOND PART

OF

Philoſophical Furnaces:

Wherein is Deſcribed the Nature of the Second Furnace; by the help whereof, all volatile, ſubtle, and combuſtible things may be diſtilled; whether they be Vegetables, Animals, or Minerals, and that after an unknown and very compendious Way; whereby nothing is loſt, but even the moſt ſubtle ſpirits may be caught and preſerved, which elſe without the means of this Furnace is impoſſible to be done by Retorts or other Diſtilling Inſtruments.

Of the Structure of the Second Furnace.

THE Diſtilling Veſſel muſt be made of Iron, or good earth, ſuch as can abide in the fire (whereof in the fifth Part of this Book it ſhall be taught) and you may make it as big or as little as you pleaſe, according as your occaſion ſhall require. That of iron is moſt fit to be uſed for ſuch ſpirits, as are not very ſharp or corroding, elſe they would corrode the veſſel: but that of earth may be uſed for ſuch things, as ſhew their activity upon the Iron, and do make it to melt, as ſulphur, Antimony and the like; and therefore you ought to have two ſuch veſſels, *viz.* one of iron, and one of earth, to the end that for both ſorts of materials (corroſive or not corroſive) you may have proper veſſels, and fit furnaces for their diſtilling, and that they may not he ſpoiled by things contrary and hurtful to them. The ſhape of the veſſel is ſhewed by the foregoing figure, *viz.* the lower part of it ſomewhat wider than the upper part, and twice as high as wide; at the top having a hollow ſpace between the two edges or brims, whereinto the edge of the lid may cloſe and enter in an inch deep. The lid muſt have a ring or handle, by which it may be taken off and put on again with a pair of tongs. The lid muſt have a deep edge anſwering to the hollow ſpace aforeſaid. The lower part muſt have three knobs or ſhoul-

ders thereby to reſt upon the wall of the furnace; the form whereof is no other, than that of a common diſtilling furnace with a ſand Copple; as the figure of it doth ſhew: but if you will not have the furnace, then it needeth no knobs or ſhoulders, if ſo be the diſtilling veſſel be flat at the bottom, or elſe have legs, for to ſtand upon them: Beneath the edge of the veſſel there comes forth a ſpout or pipe of a ſpan in length, and one or two inches wide, and ſomewhat narrower before than behind, through which the ſpirits are conveyed into the Receiver.

See the fourth Figure before the firſt part, wherein the Letter *A.* repreſents the Furnace, with the Iron diſtilling Veſſel faſtned into it, whereunto a Receiver is applied.

B. The Diſtiller, with his left hand taking off the lid, and with his right hand caſting in his prepared matter.

C. The external form of the diſtilling veſſel.

D. The internal form of the veſſel.

E. Another diſtilling veſſel, which is not faſtned to a furnace, but only ſtandeth upon Coals.

The way or manner to perform the Diſtillation.

WHen you intend to diſtil, then firſt make a fire in the Furnace, that the diſtilling veſſel come to be very hot. But if it be not faſtned to the Furnace, then ſet it upon a grate, and lay ſtones about it, and coals between, and ſo let it grow hot, and lay melted lead in the ſpace between the two edges or brims, to the end, that the lid, when it is put on, may cloſe exactly, ſo that no ſpirit can get through. This done, take a little of the matter you intend to diſtil, and caſt it in, and preſently put on the lid, and there will be no other paſſage left but through the pipe, to which there muſt be applyed and luted a very big receiver. As ſoon as the ſpecies caſt in come to be warm, they let go their ſpirit, which doth come forth into the receiver: and becauſe there was but little of the matter caſt in, it hath no power to force through the lute, or to break the receiver, but muſt ſettle it ſelf. This done, caſt in a little more of your matter, cover it and let it go till the ſpirit be ſettled; continue this proceeding ſo long, until you have ſpirits enough: but take heed, that you caſt in no more at once, than the receiver is able to bear, elſe it will break. And when your veſſel is full, the diſtillation not being ended, then take off the lid, and with an iron ladle take out the Caput Mortuum; and ſo begin again to caſt in, and ſtill but a little at a time, and continue this as long as you pleaſe.

Thus in one day you may diſtil more in a ſmall veſſel, than otherways you could do in a great retort; and you need not fear the leaſt loſs of the ſubtile ſpirit, nor the breaking of the receiver by the abundance of the ſpirits: and you may ceaſe or leave off your diſtilling, and begin it again when you liſt: alſo the fire cannot be made too ſtrong, ſo that it might cauſe any hurt or damage; but by this way you may make the moſt ſubtile ſpirits, which is impoſſible to be done by any Retort. But if you will diſtil a ſubtil ſpirit by a Retort, as of Tartar, Harts-horn, Salarmoniack, or the like, you cannot do it without prejudice (though there were but half a pound of the matter in it) the ſubtleſt ſpirits coming forth with force, ſeek to penetrate through the lute, if that be not good, but if that be good, ſo that the ſpirits cannot paſs through it, then they break the receiver, becauſe it cannot poſſibly hold ſuch a quantity of ſubtle ſpirits at once. For when they are coming, they come ſo plentifully, and with ſuch a force, that the receiver cannot contain them, and ſo of neceſſity muſt flye aſunder, or muſt paſs through the lutum; All which is not to be feared here, becauſe there is but a little caſt in at once, which cannot yield ſuch a quantity of ſpirits, as to force the receiver to break: And when there comes forth no more ſpirits, and the former is ſettled, then more of the matter is to be caſt in; and this is to be continued ſo long, until you have ſpirits enough. Afterward take off the receiver, and put the ſpirit into ſuch a Glaſs (as in the fifth part of this book, amongſt the Manuals, ſhall be diſcovered) wherein it may be kept ſafely without waſting or evaporating.

In this manner all things, Vegetable, Animal, or Mineral, may be diſtilled in this Furnace, and much better, than by means of a Retort: eſpecially ſuch ſubtile ſpirits (as by the other way of diſtilling cannot be ſaved, but paſs through the lutum) are got by this our way; and they are much better than thoſe heavy oyles, which commonly are taken for ſpirits, but are none, being only corroſive waters. For the nature and condition of a ſpirit is to be volatile, penetrating and ſubtile, and ſuch are not thoſe ſpirits of ſalt, Vitriol, Allome and Nitre, which are uſed in Apothecary ſhops, they being but heavy oyles, which even in a warm place do not evaporate or exhale.

But a true ſpirit, fit for Medicinal uſe, muſt riſe or aſcend before the phlegm, and not after; for whatſoever is heavier than phlegm, is no volatile ſpirit, but a heavy ſpirit or (rather called) a ſowre heavy oyl. And it is ſeen by experience, that the Apothecaries ſpirit of vitriol will cure no falling ſickneſs, which vertue is aſcribed to that ſpirit, and indeed juſtly: for the true ſpirit of vitriol performeth that cure out of hand. Likewiſe their ſpirit of Tartar (as they call it) is no ſpirit, but only a ſtinking phlegm or vinegar.

The way to make ſuch true ſpirits, I will now ſhew, becauſe much good may be done by them in all manner of Diſeaſes. And this way of diſtilling ſerveth only for thoſe which ſeek after good Medicines: but others which care not whether their medicines be well prepared or no, need not take ſo much pains as to build ſuch a furnace, and to make their ſpirits themſelves, for at any time they can buy for a ſmall matter, a good quantity of dead and fruitleſs ſpirits at the common ſellers and Apothecaries.

Hence it is no marvel, that now adaies ſo little good is done by Chymical medicaments, which of right ſhould far out-ſtrip all the Galenical in goodneſs and vertue. But alas! it is come to that paſs now, that a true Chymiſt, and honeſt Son of *Hermes*, is forced almoſt to bluſh, when he heareth men talk of Chymical medicines, becauſe they do no ſuch miracles, as are aſcribed unto them. Which infamy is occaſion'd by none more, than by careleſs Phyſicians, which though they make uſe of Chymical medicines, (becauſe they would fain be eſteemed to know more than others) yet they do take greater care for their kitchen, than for the welfare of their Patients; and ſo buying ill-prepared Medicines of unskilful ſtillers, and withal uſing them undiſcreetly

creetly (whereby they many times do more hurt than good to the ſick) they lay ſuch foul aſpertions upon the noble Art of Chymiſtry.

But an induſtrious and accurate Phyſician is not aſhamed to make his Medicines himſelf, if it be poſſible, or at leaſt to have them made by good and well-exercis'd Artiſts: whereupon he may better rely, and get more credit, than one that knoweth not whereof, nor how his Medicine which he doth adminiſter to his patients is prepared. But ſuch wicked and ignorant men will one day fall ſhort of their anſwer before the Judgment of the righteous Samaritan.

How to make the Acid Oyl and the volatile ſpirit of Vitriol.

HItherto I have taught, how to diſtil in general, and to get the ſubtle ſpirits. There remaineth now to deſcribe what Manuals or Preparations are fitting for every matter in particular; and firſt,

Of Vitriol.

TO diſtil Vitriol, there needs no other preparation, but only that it be well viewed, and if there be any filth amongſt it, that the ſame be carefully pickt out, leſt being put together with the Vitriol into the diſtilling veſſel, the ſpirit be corrupted thereby. But he that will go yet more exactly to work, may diſſolve it in fair water, then filtrate it, and then evaporate the water from it till a skin appear at the top, and then ſet it in a cold place, and let it ſhoot again into Vitriol; and then you are ſure that no impurity is left in it.

Now your veſſel being made red hot, with an Iron ladle caſt in one or two ounces of your Vitriol at once, put on the lid, and preſently the ſpirits together with the phlegm will come over into the receiver, like unto a white cloud or miſt; which being vaniſhed, and the ſpirits partly ſettled, carry in more Vitriol, and continue this ſo long, until your veſſel be full: Then uncover your veſſel, and with a pair of tongs or an iron ladle take out the Caput Mortuum, and caſt more in; and continue this proceeding as long as you pleaſe, ſtill emptying the veſſel when it is filled, and then caſting in more matter, and ſo proceeding until you conceive that you have got ſpirits enough. Then let the fire go out, and let the furnace cool; take off the receiver, and pour that which is come over into a retort, and ſet the retort in ſand, and by a gentle fire diſtil the volatile ſpirit from the heavy oyl; having firſt joyned to the retort the receiver, which is to receive the volatile ſpirit, with a good lutum, ſuch as is able to hold ſuch ſubtle ſpirits, the making whereof ſhall be taught in the fifth part of this Book, amongſt the Manuals.

All the volatile ſpirit being come over, which you may know by the falling of bigger drops, then take off the receiver, and cloſe it very well with wax, that the ſpirit may not make an eſcape; then apply another (without luting it) and ſo receive the phlegm by it ſelf, and there will remain in the retort a black and heavy corroſive oyl, which if you pleaſe, you may rectifie, forcing it over by a ſtrong fire, and then it will be clear; if not, let all cool, then take out your Retort together with the black oyl, and pour upon it the volatile ſpirit, which in the rectifying went over firſt; put the retort into the ſand, and apply a receiver, and give it a very gentle fire, and the volatile ſpirit will come over alone, leaving its phlegm behind with the oyl, which by reaſon of its dryneſs doth eaſily keep it. Thus the ſpirit being freed from all phlegm, is become as ſtrong as a meer fire, and yet not corroſive. And if this ſpirit be not rectified from its own oyl, it will not remain good, but there doth precipitate a red powder after it hath ſtood for ſome ſpace of time, and the ſpirit loſeth all its vertue, inſomuch that it is not to be diſcerned from ordinary water, which doth not happen when it is rectified. The reaſon of this precipitation is no other than the weakneſs of the ſpirit, which is accompanied with too much water, and therefore not ſtrong enough for to keep its ſulphur, but muſt let it fall: but after it is rectified by its own oyl, it can keep its ſulphur well enough, becauſe then it is freed from its ſuperfluous moiſture. However the red powder is not to be thrown away, but ought to be kept carefully; becauſe it is of no leſs vertue than the ſpirit it ſelf. And it is nothing elſe but a Volatile ſulphur of Vitriol. It hath wonderful vertues, ſome of which ſhall be related.

The Uſe and Doſe of the Narcotick ſulphur of Vitriol.

OF this ſulphur 1, 2, 3, 4. or more grains (according to the condition of the patient) given at once mitigates all pains, cauſeth quiet ſleep; not after the manner of Opium, Henbane, and other the like medicines, which by ſtupifying and benumbing cauſe ſleep, but it performeth its operation very gently and ſafely, without any danger at all, and great Diſeaſes may be cured by the help thereof. *Paracelſus* held it in high eſteem, as you may ſee, where he doth write of *Sulphur embryonatum.*

Of the Uſe and Vertue of the volatile ſpirit of Vitriol.

THis ſulphurous Volatile ſpirit of Vitriol, is of a very ſubtle and penetrating quality, and of a wonderful operation; for ſome drops thereof being taken and ſweated upon, doth penetrate the whole body, openeth all obſtructions, conſumeth thoſe things that are amiſs in the body, even as fire. It is an excellent medicine in the Falling ſickneſs, in that kind of madneſs or rage which is called *Mania*, in the Convulſion of the Mother, called *Suffocatio Matricis*, in the Scurvy; in that other kind of madneſs which is called Melancholia Hypochondriaca; and other Diſeaſes proceeding from Obſtructions and Corruption of the Blood: It is alſo good in the Plague, and all other Feavers: mingled with ſpirit of wine, and daily uſed, it doth wonders in all external accidents: Alſo in the Apoplexy, ſhrinking and other diſeaſes of the Nerves, the diſtreſſed limb rubbed therewith, it doth penetrate to the very marrow in the bones; it doth warm and refreſh the cold ſinews, grown ſtiff: In the Cholick, beſides the internal uſe, a little thereof in a clyſter applyed, is a preſent help: Externally uſed in the Gout, by anointing the places therewith, aſſwageth the Pains, and taketh away all tumours and inflammations: It doth heal ſcabs,

tetters and ring-worms, above all other medicines; it cureth new wounds and old ſores, as Fiſtulaes, Cancers, Wolves, and what name ſoever elſe they may have: It extinguiſheth all inflammations, ſcaldings, the Gangrene, diſſipateth and conſumeth the knobs and excreſcencies of the skin. In a word, this ſpirit, which the wiſe men of old called *Sulphur Philoſophorum*, doth act univerſally in all diſeaſes, and its vertue cannot ſufficiently be praiſed and expreſſed: And it is much to be admired, that ſo excellent a Medicine is no where to be found.

If it be mingled with Spring water, it doth make it pleaſantly ſowriſh, and in taſte and vertue like unto the natural ſowre water of wells.

Alſo by this ſpirit, many diſeaſes may be cured at home; ſo that you need not go to bathes afar off, for to be rid of them.

Here I could ſet down a way, how ſuch a ſpirit may be got in great abundance for the uſe of bathing, without diſtillation, whereby miraculous things may be done, but by reaſon of the ungratefulneſs of men, it ſhall be reſerved for another time.

Of the vertue and uſe of the corroſive oyl of Vitriol.

THis oyl is not much uſed in Phyſick, although it be found almoſt in every Apothecaries ſhop, which they uſe for to give a ſowriſh taſt to their ſyrups and conſerves. Mingled with ſpring water and given in hot diſeaſes, it will extinguiſh the unnatural thirſt, and cool the internal parts of the body. Externally it cleanſeth all unclean ſores, applyed with a feather; it ſeparateth the bad from the good, and layeth a good foundation for the cure.

Alſo if it be rectified firſt, ſome metals may be diſſolved with it and reduced into their Vitriols, eſpecially Mars and Venus; but this is to be done by adding common water thereunto, elſe it will hardly lay hold on them. The way of doing it is thus.

How to make the Vitriol of Mars and Venus.

TAke of your heavy oyl, juſt as it came over, *viz.* together with its phelgm (but that the Volatile ſpirit be drawn off from it firſt) as much as you pleaſe, put it into a glaſs body together with plates of copper or iron, ſet it in warm ſand, and let it boyl until that the oyl will diſſolve no more of the metal, then power off the liquor, filtre it through brown paper, and put it into a low gourd glaſs, and ſet it in ſand, and let the phlegm evaporate until there appear a skin at the top, then let the fire go out, and the glaſs grow cool; then ſet it in a cold place, and within ſome days there, will ſhoot fair Cryſtals; if of Iron, greeniſh; if of Copper, then ſomething blewiſh; take them out and dry them upon filtering paper, the remaining liquor, which did not ſhoot into Vitriol, evaporate again in ſand, and then let it ſhoot as before; continue this proceeding, until all the ſolution (or filtred liquor) be turned to Vitriol. This Vitriol is better and purer than the common; for it yieldeth a better Volatile ſpirit, and for that reaſon I did ſet down the way how to make it. There may alſo be made a good Vitriol of both theſe metals by the means of ordinary yellow brimſtone; but becauſe the making of it is more tedious, than of this here ſet down, I think it needleſs to deſcribe its preparation in this place.

The way to make a fair blew Vitriol out of Luna *(that is, ſilver.)*

DIſſolve the ſhavings or filings of ſilver with rectified oyl of Vitriol, adding water thereunto, but not ſo much as to Iron and Copper: Or elſe, which is better, diſſolve calcined ſilver, which hath been precipitated out of Aqua fortis either with Copper or ſalt water; the ſolution being ended pour it off and filtre it, and drop into it of ſpirit of urin or Sal armoniac, as long as it doth hiſs, and almoſt all the ſilver will precipitate again out of the oyl, and ſo there will fall a white powder to the bottom; This precipitated ſilver together with the liquor pour into a phiall-glaſs, ſet it to boyl in ſand for twenty four hours, and the liquor will diſſolve again almoſt all the precipitated ſilver-calx and become blew thereby. Then pour off the ſolution (or liquor) and filtre it through brown paper, and abſtract the moiſture till a skin ariſe at the top; then in a cold place let it ſhoot to Vitriol. With the remaining liquor proceed further, as above in the preparation of the Vitriol of Iron and Copper hath been taught.

By this way you will get an excellent Vitriol out of ſilver, which from 4, 5, 6, to 10. grains uſed only of it ſelf, will be a good purge, eſpecially in diſeaſes of the brain.

If you have a good quantity of it, that you may diſtill a ſpirit thereof, you will get not only an acid (or ſowre) but alſo a volatile ſpirit, which in the infirmities of the brain is moſt excellent; that which in the diſtilling remains behind, may be reduced again into a body, ſo that you loſe nothing of the ſilver, ſave onely that which is turned into ſpirit.

Moreover, the acid (or ſowre) oyl of common Vitriol, doth precipitate all metals and ſtones of beaſts or fiſhes; alſo pearls and corals, they being firſt diſſolved in ſpirit of ſalt or of Nitre, and maketh fair light powders of them (which by the Apothecaries are called Magiſteries) much fairer than by precipitation with ſalt of Tartar is done, eſpecially of corals and pearls, ſuch a fair gliſtering and delicate powder is made; and likewiſe alſo of mother of pearl, and other ſhels of ſnailes, that it giveth as fair a gloſs to them, as the faireſt oriental pearls have; which way hath not been made common hitherto, but being known only to few, hath been kept very ſecret by them, as a ſingular Art Such Magiſteries commonly were precipitated out of vinegar only by ſalt of Tartar, which for lightneſs, whiteneſs and fair gloſs are not comparable at all to ours: But if inſtead of the oyl of Vitriol you take oyl of ſulphur, then theſe powders will be fairer than when they are done by the oyl of Vitriol, in ſo much, that they may be uſed for painting for a black skin.

Having made mention of Magiſteries, I cannot forbear to diſcover the great abuſe and error, which is committed in the preparing of them.

Paracelſus in his Archidoxes teacheth to make Magiſteries, which he calleth extracted Magiſteries: but ſome of his diſciples teach to make precipitated Magiſteries which are different from the former. *Paracelſus* is clean of another opinion in the preparing of his Magiſteries, than others in the making of theirs: doubtleſs *Paracelſus* his Magiſteries were

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good cordial living medicines, whereas the other are but dead carkaſes, and although they be never ſo fair, white and gliſtering, yet in effect they prove but a groſs earthy ſubſtance, deſtitute of vertue.

I do not deny, but that good medicines may be extracted out of pearls and corals, for I my ſelf alſo do deſcribe the preparations of ſome of them; but not at all after ſuch a way as theirs is. For what good or exalting can be expected by ſuch a preparation, where a ſtony matter is diſſolved in corroſive waters, and then preciptated into ſtone again? Can its vertue be increaſed thereby? ſurely no, but rather it is diminiſhed, and made much the worſe thereby. For it is well known, that the corroſive ſpirits (no leſs than fire) do burn ſome certain things; for not all things are made better by fire or corroſives, but moſt of them are abſolutely ſpoyled by them. Some perchance will ſay, that ſuch preparations of Magiſteries are onely for to be reduced into a finer powder, that ſo much the ſooner they may perform their operation. To which I anſwer, that pearls, corals, and other things of the like nature, if they be once diſſolved by corroſive waters, and then precipitated and edulcorated, never or hardly can be diſſolved again by acid ſpirits. Whence it is evident that by ſuch preparations they are not opened or made better, but rather cloſed or made worſe. And we ſee alſo by daily experience that thoſe Magiſteries do not thoſe effects, which are aſcribed unto them. By which it appeareth clearly, that to the Archeus of the ſtomach they are much leſs grateful than the crude unprepared corals and pearls; whoſe tender eſſence being not burnt up by corroſives, do oftentimes produce good effects. For our Anceſtors have aſcribed unto corals and pearls, that they purifie the impure and corrupt blood in the whole body, that they expel Melancholly and ſadneſs, comforting the heart of man, and making it merry, which alſo they effectually perform: whereas the Magiſteries do not. And this is the reaſon, why unprepared corals, pearls and ſtones of fiſhes have more effect, than the burnt Magiſteries. For it is manifeſt and well known, that the aboveſaid diſeaſes for the moſt part do proceed from obſtructions of the ſpleen, which obſtructions are nothing elſe, but a tartarous juice or a ſowre flegme which hath poſſeſſed and filled up the entrals, and coagulated it ſelf within them. By which obſtruction not only head-ach, giddineſs, panting of the heart, trembling of the limbs, a ſpontaneous laſſitude, vomits, unnatural hunger; alſo, loathing of victuals; then cold, then hot fluſhing fits, and many more ſtrange ſymptomes are cauſed; but alſo a moſt hurtful rottenneſs and corruption is introduced into the whole maſs of blood, from whence the leproſie, ſcurvey, and other loathſome or abominable ſcabs do ſpring.

Of which evil the onely cauſe (as hath been ſaid) is a crude acid Tartar, from which ſo many great diſeaſes do riſe.

This to be ſo may eaſily be proved; for it is notorious, that melancholick folks, hypocondriaques, and others do often caſt up a great quantity of acid humor, which is ſo ſharpe that no vinegar is comparable to it, and doth ſet their teeth on ſuch an edge, as if they had eaten unripe fruit.

What remedy now? take away the cauſe and the diſeaſe is taken away. If you could take away the peccant matter by purgings, it would be well, but it remaineth obſtinate and will not yield to them. By vomit it may be diminiſhed in ſome meaſure. But becauſe that not every one can abide vomiting, it is therefore no wiſdome to turn evil into worſe. Shall then this tartar be killed and deſtroyed by contraries, which indeed in ſome ſort may be effected; as when you uſe vegetables or animals, whoſe vertue conſiſteth in a volatile ſalt: ſuch are all ſpecies or ſorts of creſſes, Muſtard-ſeed, horſe-radiſh, ſcurvy graſs, alſo the ſpirit of Tartar, of Harts-horn, and of urine and the like, which by reaſon of their penetrating faculty paſs through all the body, finding out the Tartar thereof, deſtroying the ſame, as being contrary unto it; and in this combat two contrary natures is kindled, a great burning heat, whereby the whole body is throughly heated and brought to ſweating; and whenſoever by theſe contraries a ſweating is cauſed, there is always mortified ſome of this hurtful Tartar. But becauſe that of that acid humor but a little at a time can be mortified and edulcorated by contrary volatile ſpirits, and that therefore it would be required to uſe them often, for to kill and expell all the Tartar; and becauſe alſo (as hath been mentioned before) a ſtrong ſweat always is cauſed by every ſuch operation, whereby the natural ſpirits are much weakened, ſo that the patient would not be able to hold out long thereby, but by taking away of one evil, another and greater one would be occaſioned.

And therefore ſuch things muſt be offered to that hungry acid humour, by which the corroſive nature thereof, may be mortified and grow ſweet, with that proviſo nevertheleſs, that thoſe things be ſuch as are not contrary or hurtful to the nature of man, but grateful and friendly, as are corals, pearls and crabs eyes, *&c.*

For amongſt all ſtones none are more eaſily to be diſſolved than Pearls, Corals, Crabbs-eyes, and other ſtones of fiſhes.

But the truth of this, *viz.* that every corroſive is killed by feeding upon pearls and corals, and thereby can be made ſweet; and beſides, how a ſowre coagulated Tartar, by the help of corals or pearls may be reduced to a ſweet liquor (a pleaſant and acceptacle medicine to the nature of man) which never can be coagulated again by any means, ſhall be afterwards proved and taught when I ſhall come to treat of Tartar.

Now in tartareous coagulations and obſtructions of the internals proceeding from the predominancy of an acid humor there is no better remedy, than to give the patient every morning faſting from ℈ſs. to ℥i. (more or leſs, according to the condition of the patient) of red corals and pearls made into powder, and to let him faſt two or three hours upon it, and ſo to continue daily until you ſee amendment: By this means the hurtful acid humor is mortified, and dulcified by the corals and pearls, ſo that afterwards it may be overcome by nature, whereby the obſtructions are removed, and the body freed from the diſeaſe.

This my opinion of the abuſe of Magiſteries and the good uſe of Corals I could not conceal, although I do know for certain, that it will take but with few, in regard that it will ſeem very ſtrange to moſt. However, happily there may be ſome yet, that will not be unwilling to ſearch into the truth, and to conſider further of it, and at laſt will find this not to be ſo ſtrange, as it ſeemed to them at the firſt: but he that cannot believe or comprehend it, may keep to his Magiſteries.

And if it ſeem ſo ſtrange unto any, that corals or pearls made into powder ſhall be concocted in the ſtomach, and ſo put forth their vertue, what will you ſay then, if I do prove, that even whole pearls, crabs eyes, and corals being ſwallowed, are totally conſumed by the Melancholy humor, ſo that nothing cometh forth again among the excrements ? and which is more, even the like may be ſaid of hard and Compact metals, as Iron,and Speaucer or Zinck : But this muſt be underſtood only of thoſe that are of a Melancholick conſtitution but not ſo in others, *viz*, thoſe that are of a ſanguine,and thoſe that are of a phlegmatick conſtitution, to whom ſuch like things are ſeldom preſcribed. For I have ſeen many times, that againſt obſtructions, to ſtrong bodies there hath been given at once from ℈ſs. to ℥ i. of the ſhavings or filings of Iron, and they found much good by it, yea more help then by other coſtly medicines of the Apothecaries, whereof they had uſed many before, but to no purpoſe, by reaſon whereof their excrements came from them black, juſt as it uſeth to fall out with thoſe that make uſe of medicinal ſowre waters, which run through iron mines, and thereby borrow a ſpiritual mineral vertue.

Now if thoſe filings of iron had not been conſumed in the ſtomach, how come it that the excrements are turned black ? ſo then it is ſufficiently proved, that even a hard unprepared metal can be conſumed in the ſtomach: and if ſo, why not as well ſoft pearls and corals ?

Which is alſo to be ſeen by children, that are troubled with worms, if there be given unto them 4, 6, 8. to 12. or 16. grains of the fineſt filings of ſteel or iron, that all the worms in the body are killed thereby, their ſtomach and guts ſcowred very clean, and their ſtools alſo turned black. But this muſt be obſerved by children, when the worms are killed, and yet remain in the guts (becauſe that the iron in a ſmal quantity is not ſtrong enough for to expel them, but only make the body ſoluble) that a purge muſt be uſed after, for to carry them out ; for elſe if they do remain there, others will grow out of their ſubſtance. But to thoſe that are more in years, you may give the Doſe ſo much the ſtronger, as from ℈ i. to ℥i. that the worms alſo may be carryed out, they being better able to endure it than little children, and although ſometimes a vomit doth come, yet it doth no hurt, but they will be but ſo much the healthier afterward.

And thus Iron may be uſed, not only againſt worms, but alſo againſt all ſtomach-agues, head-ach, and obſtructions of the whole body, without any danger and very ſucceſsfully, as a grateful or very acceptable medicine to Nature ; for after a powerful magnetical way it doth attract all the ill humors in the body, and carrieth them forth along with it. Of whoſe wonderful vertue and nature, there is ſpoken more at large in my Treatiſe of the Sympathy and Antipathy of things. Which ſome Phyſitians perceiving and ſuppoſing by Art to make it better, they ſpoiled it, and made it void of all vertue: for they taking a piece of ſteel, made it red-hot, and held it againſt a piece of common Sulphur, whereby the ſteel grew ſubtle, ſo they did let it drop into a veſſel filled with water ; then they took it out, and dryed it, and made it into powder, and uſed it againſt obſtructions, but to no effect almoſt ; for the Iron was ſo altered by the ſulphur, and reduced to an inſoluble ſubſtance (which ought not to have been ſo) that it could perform no conſiderable operation: But if they had made the ſteel more ſoluble (whereas they made it more inſoluble) than it was of it ſelf before, then they had done a good work : for he that knoweth ſulphur, doth know well enough, that by no *Aquafortis* or *Aqua Regis* it can be diſſolved ; and how how could it then be conſumed by an animal humor ?

Hitherto it hath been proved ſufficiently, that in ſome men, eſpecially in thoſe that are of a Melancholick conſtitution there is an acid humor, which can ſufficiently diſſolve all eaſily ſoluble metals and ſtones : and that therefore it is needleſs to torture, and diſſolve pearls, corals and the like with corroſive waters before they be adminiſtred to patients : but that the Archeus of the ſtomach is ſtrong enough by the help of the ſaid humors to conſume thoſe eaſily ſoluble things, and to accept of that which ſerveth his turn, and to reject the reſt.

But it is not my intent here, that this ſhould be underſtood of all metals and ſtones ; for I know well, that other metals and ſtones (ſome excepted) before they are duly prepared, are not fit for Phyſick, but muſt be fitted firſt, before they be adminiſtred or given unto patients.

For this relation I made only for to ſhew, how ſometimes good things (though with intent to make them better) are made worſe, and ſpoiled by thoſe that do not make an exact ſearch into nature and her power.

I hope this my admonition will not be taken ill, becauſe my aim was not vain-glory, but only the good of my neighbour.

Now let us return again to Vitriol.

Of the ſweet oyl of Vitriol.

THE Ancients make mention of a ſweet and green oyl of Vitriol, which doth cure the falling ſickneſs, killeth worms, and hath other good qualities and vertues beſides: and that the Oyl is to be diſtilled *per deſcenſum*. To attain unto this oyl the later Phyſitians took great paines, but all in vain : becauſe they did not underſtand at all the Ancients about the preparing of this oyl, but thought to get it by the force of fire, and ſo uſing violent diſtillation, they got no ſweet oyl, but ſuch as was very ſowre and corroſive, which in taſte, efficacy and vertue, was not comparable at all to the former.

However they aſcribed unto it (though falſely) the ſame vertues, which the ancients (according to truth) did unto theirs. But daily experience ſheweth, that the oyl of vitriol as it is found ordinarily, cureth no falling ſickneſs, nor killeth worms, whereas this Philoſophical doth it very quickly. Whence it appeareth, that the other is nothing like unto the true medicinal oyl of vitriol, neither is it to be compared to it.

I muſt confeſs indeed, that *per deſcenſum* out of common vitriol, by the force of the fire, there may be got a greeniſh oyl, which yet is not better than the other, becauſe it proveth as ſharp in taſt, and of as corroding a quality, as if it had been diſtilled through a Retort.

Thoſe that found out this oyl, as *Paracelſus*, *Baſilius*, and ſome few others, did always highly eſteem it, and counted it one of the four main pillars of Phyſick. And *Paracelſus* ſaith expreſly in his writings, that its viridity or greenneſs muſt not be taken away or marred (which indeed a very little heat can do) by the fire,for (ſaith he) if it be deprived of its greenneſs, it is deprived alſo of its efficacy

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cy and pleaſant eſſence. Whence it may be perceived ſufficiently, that this ſweet green oyl is not to be made by the force of the fire as hitherto by many hath been attempted, but in vain.

And it is very probable, that the ancients, which did ſo highly praiſe the oyl of vitriol, happily knew nothing of this way of diſtilling, which is uſed by us now a days: for they only ſimply followed Nature, and had not ſo many ſubtle and curious inventions and ways of diſtilling.

But however it is certain, that ſuch a ſweet and green oyl cannot be made of vitriol by the force of the fire, but rather muſt be done by purification, after a ſingular way; for the Ancients many times underſtood purification for diſtillation: as it is evident, when they ſay, diſtill through a filtre, or through filtring paper: which by us is not accounted for diſtillation, but by them it was.

However, this is true and very ſure, that a great Treaſure of health (or for the health of man) lyeth hidden in Vitriol: yet not in the common, as it is ſold every where, and which hath endured the heat of the fire already; but in the Oare as it is found in the earth, or its mine. For as ſoon as it cometh to the day light, it may be deprived by the heat of the Sun of its ſubtle and penetrating ſpirit, and ſo made void of vertue; which ſpirit, if by Art it be got from thence, ſmelleth ſweeter then muſk and amber, which is much to be admired, that in ſuch a deſpicable mineral and groſs ſubſtance (as it is deemed to be by the ignorant) ſuch a royal medicine is to be found.

Now this preparation doth not belong to this place, becauſe we treat here only of ſpirits, which by the force of fire are driven over. Likewiſe alſo, there doth not belong hither the preparation of the green oyl, becauſe it is made without the help of fire. But in regard, that mention hath been made of it here, I will (though I kept it always very ſecret) publiſh it for the benefit of poor patients, hoping that it will do much good to many a ſick man.

For if it be well prepared, it doth not only cure perfectly every Epilepſie or Convulſion in young and old; and likewiſe readily and without fail killeth all worms within and without the body, as the Ancients with truth aſcribed unto it; but alſo many Chronical diſeaſes and ſuch as are held incurable, may be happily overcome and expelled thereby, as the plague, pleureſie, all ſorts of feavers and agues, what ever they be called, head-ach, collick, riſing of the mother; alſo all obſtructions in the body, eſpecially of the ſpleen and liver, from whence *Melancholia Hypochondriaca*, the ſcurvy, and many other intolerable diſeaſes do ariſe: Alſo the blood in the whole body is by the means thereof amended and renewed, ſo that the Pox, Leproſie, and other like diſeaſes proceeding from the infection of the blood are eaſily cured thereby: Alſo it healeth ſafely and admirably all open ſores and ſtinking ulcers turned to fiſtula's in the whole body, and from what cauſe ſo ever they did proceed, if they be anoynted therewith, and the ſame alſo be inwardly uſed beſides.

Such and other diſeaſes more (which it is needleſs here to relate) may be cured ſucceſsfully with this ſweet oyl; eſpecially, if without the loſs of its ſweetneſs it be brought to a red colour; for then it will do more then a man dare write of it, and it may ſtand very well for a *Panacea* in all diſeaſes.

Sa T. Holland de ☉ & ☽ Metallm

The preparation of the ſweet oyl of Vitriol.

COmmonly in all fat ſoyles or clayie grounds, eſpecially in the white, there is found a kinde of ſtones, round or oval in form, and in bigneſs like unto a pigeons or hens-egg, and ſmaller alſo, *viz.* as the joynt of ones finger, on the outſide black, and therefore not eſteemed when it is found, but caſt away as a contemptible ſtone. Which if it be cleanſed from the earth, and beaten to pieces, looks within of a fair yellow and in ſtreaks, like a gold Marcaſite, or a rich gold Oare, but there is no other taſte to be perceived in it, then in another ordinary ſtone; and although it be made into powder, and boyled a long time in water, yet it doth not alter at all, nor is there in the water any other taſte or colour, than that which it had firſt (when it was poured upon the ſtone) to be perceived. Now this ſtone is nothing elſe, but the beſt and pureſt Minera (or Oare) of Vitriol, or a ſeed of Metals; for Nature hath framed it round, like unto a vegetable ſeed, and ſowed it into the earth, out of which there may be made an excellent medicine, as followeth.

French Jays these are the Copperas stones pa: 108.

Take this Oare or Minera beaten into pieces, and for ſome ſpace of time, lay or expoſe it to the cool air, and within twenty or thirty days it will magnetically attract a certain ſaltiſh moyſture out of the air, and grow heavy by it, and at laſt it falleth aſunder to a black powder, which muſt remain further lying there ſtill, until it grow whitiſh, and that it do taſte ſweet upon the tongue like vitriol. Afterward put it in a glaſs-veſſel, and pour on ſo much fair rain water, as that it cover it one or two inches; ſtir it about ſeveral times in a day, and after a few days the water will be coloured green, which you muſt powre off, and powre on more fair water, and proceed as before, ſtirring it often until that alſo come to be green: this muſt be repeated ſo often, until no water more will be coloured by ſtanding upon it. Then let all the green waters which you poured off, run through filtring paper, for to purifie them; and then in a glaſs-body cut off ſhort let them evaporate till a skin appear at the top: then ſet it in a cold place, and there will ſhoot little green ſtones, which are nothing elſe but a pure vitriol: the remaining green water evaporate again, and let it ſhoote as before: and this evaporating and Cryſtalliſing muſt be continued until no vitriol more will ſhoote, but in warm and cold places there remain ſtill a deep green pleaſant ſweet liquor or juyce: which is the true ſweet and green oyl of Vitriol, and hath all the vertues above related.

French says the Crystals are to the ☉ & ☽: & the ☉ is the ☌

But now this green oyl further without fire may at laſt (after the preparing of many fair colours between) be reduced to a blood red, ſweet and pleaſant oyl, which goeth far beyond the green both in pleaſantneſs and vertue, and is in compariſon to it like a ripe grape to an unripe: Hereof happily ſhall be ſpoken at another time, becauſe occaſion and time will not permit me now to proceed further in it. And therefore the Philo-Chymical Reader is deſired for the preſent to be contented with the green oyl, to prepare it carefully, and to uſe it with diſcretion; and doubtleſs he will get more credit by it, and do more wonderful things then hitherto hath been done by the heavy corroſive oyl.

The uſe and Doſe of the ſweet oyl of Vitriol.

OF this green oyl, there may be taken from 1. 2. 4. 8. 10. or 12. drops at once, according to the condition of the patient and the diſeaſe, in fit Vehicles, in Wine or Beer, in the morning faſting, as other medicines are uſually taken: Alſo the Doſe may be increaſed or leſſened, and as often reiterated as the diſeaſe ſhall require.

This Oyl expelleth all ill humors, not only by ſtoole and vomits, but alſo by urin and ſweating, according as it doth meet with ſuperfluities; and this very ſafely, and without any danger at all; whereby many diſeaſes radically or perfectly may be cured.

Let no man wonder that I aſcribe ſuch great vertues unto this oyl, it coming from ſuch a deſpicable ſtone, and its preparation requiring no great Art or paines, as thoſe intricate deceitful proceſſes do, that are every where extant in books quite filled up with them. And it is no marvel, that men are in love with ſuch falſe and coſtly proceſſes; for the moſt of them do not believe, that any good is to be found in things that are not in eſteem; but only make great account of dear things, far fetcht, and requiring much time and paines for to be prepared.

Such men do not believe the word of God, teſtifying, *That God is no reſpecter of perſons*, but that all men that fear and love him, are accepted of him. If this be true (which no good Chriſtian will doubt) then we muſt believe alſo, that God created Phyſick or the matter of Phyſick as well for the poor as for the rich. Now if it be alſo for the poor, then certainly ſuch will be the condition thereof, that it may be obtained by them, and eaſily prepared for uſe. So we ſee that Almighty God cauſeth not only in great mens grounds to come forth good Vegetables, Animals and Minerals, for the curing of the infirmities of mankind, but that the ſame alſo are found every where elſe. Whereby we perceive, that it is alſo the will of God, that they ſhall be known by all men, and that he alone, as the Maker of all good, may be praiſed and magnified by all men for the ſame.

I doubt not but that there will be found ſelf-conceited ſcoffers, that will deſpiſe this ſo little regarded ſubject, as if no good thing could be made of it, becauſe they could find nothing in it themſelves. But be it known to them, that neither to me nor them all things have been diſcovered, but that yet many wonderful works of Nature are hidden to us: and beſides that I am not the firſt that writ of Vitriol and its medicine. For the Ancients, our dear Anceſtors, had always Vitriol in very great eſteem, as the following Verſe doth prove.

Viſitabis Interiora Terræ, Rectificando
Invenies Occultum Lapidem, Veram Medicinam.

Whereby they would give us to underſtand, that a true medicine is to be found in it. And the ſame alſo was known to the latter Philoſophers: for *Baſilius* and *Paracelſus* have always highly commended it, as in their writings is to be found.

It is to be admired, that this Oare or Metallical ſeed, which may juſtly be called the gold of Phyſitians (in regard that ſo good a medicine can be made of it) is not changed or altered in the earth, like other things that grow in it, but keepeth always the ſame form and ſhape, until it cometh to the air, which is its earth or ground, wherein it putrefieth and groweth. For firſt it ſwelleth and groweth like as a vegetable ſeed doth in the earth: and ſo taketh its increaſe and grows out of the air, juſt as a ſeed of an hearb in the earth; and the air is not only its Matrix, wherein it groweth and doth increaſe like a vegetable, but it is alſo its Sun which maketh it ripe. For within four weeks at the furtheſt it putrefieth and groweth black: and about a fourtnight after it groweth white, and then green; and thus far it hath been deſcribed here: But if you proceed further Philoſopher-like therewith, there will come forth to light at the laſt the faireſt red, and moſt pleaſant Medicine, for which God be praiſed for ever and ever, Amen.

Of the Sulphureous volatile and Acid ſpirit of common Salt, and of Allome. p. 17

THe ſame way, which above hath been taught for the making of the volatile ſpirit of vitriol, muſt be likewiſe uſed in the making of the volatile ſpirits of common ſalt and allome.

The manner of preparing.

ALlome is to be caſt in as it is of it ſelf, without mixing of it, but ſalt muſt be mixed with bole, or ſome other earth, to keep it from melting: with the ſpirit volatile, there goeth alſo along an acid ſpirit, whoſe vertue is deſcribed in the firſt part. The Oyl of Allome hath almoſt the like operation with the oyl of vitriol. Alſo the ſpirit volatile of both theſe, is of the ſame nature and condition with that which is made of vitriol: but common ſalt, and allome, do not yield ſo much, as vitriol; unleſs both, *viz.* ſalt and allome be mixed together, and ſo a ſpirit diſtilled of them.

Of the ſulphureous volatile ſpirit of Minerals and Metals, and of their preparation.

SUch a penetrative ſulphureous ſpirit may be made alſo of Minerals and Metals, which in vertue goeth beyond the ſpirit of vitriol, that of common ſalt, and that of allome, *viz.* after the following manner.

The preparation of the volatile ſpirits of Metals.

DIſſolve either Iron or Copper, or Lead or Tin with the acid ſpirit of vitriol, or of common ſalt: abſtract or draw off the phlegm; then drive the acid ſpirit again from the Metal, and it will carry along a volatile ſpirit, which by rectifying muſt be ſeparated from the corroſive ſpirit. And ſuch Metallical ſpirits are more effectual than thoſe that are made of the ſalts.

The preparation of the volatile ſpirit of Minerals.

TAke of Antimony made into fine pouder, or of golden Marcaſite, or of ſome other ſulphureous Mineral, which you pleaſe, two parts, mix therewith one part of good purified Salt nitre, and caſt in of that mixture a ſmall quantity, and then another, and ſo forth after the manner above deſcribed; and there will come over a ſpirit which is not inferiour to the former in efficacy and vertue; but it muſt alſo be well rectified. *Ano-*

Another way.

CEment what laminated or granulated Metal you pleaſe, (except gold) with half as much in weight of common ſulphur, cloſed up in a ſtrong melting pot or crucible, ſuch as doth not let the ſulphur go through, for the ſpace of half an hour, until that the ſulphur hath penetrated and broken the plates of Metal: Then beat them into powder, mix them with the like quantity in weight of common ſalt, and ſo diſtil it after the way above mentioned, and you will get a volatile ſpirit of great vertue: and every ſuch ſpirit is to be uſed for ſuch ſpecial part or member of the Body, as the Metal is proper for, out of which the ſpirit is made. So ſilver for the brain; Tinn for the lungs, Lead for the ſpleen, and ſo forth.

The ſpirit of Zinck.

OF Zinck there is diſtilled both a volatile and alſo an acid ſpirit, good for the heart; whether it be made by the help of the ſpirit of vitriol, or of ſalt, or of allome: or elſe by the means of Sulphur; for Zinck is of the nature of gold.

The volatile ſpirit of the Droſs of Regulus Martis.

THe black ſcoria of the *Regulus Martis*, being firſt faln aſunder in the air, yields likewiſe a very ſtrong ſulphureous volatile ſpirit, not much unlike in vertue unto the former.

The like Sulphureous volatile ſpirits may be made alſo of other minerals, which for brevities ſake we omit, as alſo in regard, that they are almoſt the ſame in vertue.

How to make a white acid, and a red volatile ſpirit out of ſalt nitre.

Jacob. p. 79.

TAke two parts of Allome, and one part of ſalt nitre, make them both into powder, mix them well together, and caſt into the ſtill a little and a little thereof, as above in the making of other ſpirits hath been taught, and there cometh over an acid ſpirit together with the volatile ſpirit; and ſo many pounds as there is of the materials, which are to be caſt in, ſo many pounds of water muſt be put into the receiver, to the end that the volatile ſpirits may ſo much the better be caught and ſaved. And when the diſtillation is performed, the two ſpirits may be ſeparated by the means of a gentle rectification made in *Balneo*; and you muſt take good heed, that you get the volatile ſpirit pure by changing the receiver in good time, ſo that no flegme be mixed with the red ſpirit, whereby it will be weakened and turn white. The mark whereby you may perceive, whither the ſpirit or the flegme doth go forth is this: when the volatile ſpirit goeth, then the receiver looketh of a deep red: and afterward when the flegme doth come, the receiver looks white again: and laſtly, when the heavy acid ſpirit goeth, then the receiver to be red again, but not ſo as it was, when the firſt volatile ſpirit came over.

This ſpirit may alſo be made and diſtilled after another way, *viz.* mixing the ſalt nitre with twice as much bole or brick duſt, and ſo framed into little balls to prevent melting: but no way is ſo good as the firſt; eſpecially when you will have the red volatile ſpirit.

Of the uſe of the red volatile ſpirit.

THis volatile ſpirit, which (being quite freed from flegm) remaineth always red, and doth look like blood, in all occaſions may be accounted like in vertue unto the former ſulphureous ſpirits, eſpecially in extinguiſhing of inflammations and Gangreens it is a great treaſure, clothes being dipt in it, and laid upon the grieved place; Alſo it goeth almoſt beyond all other medicines in the Eryſipelas and colick: and if there be any congealed blood in the body (which came by a fall or blow) this ſpirit outwardly applyed with ſuch waters as are proper for the grief, and alſo taken inwardly, doth diſſolve and expell it: and being mingled with the volatile ſpirit of urin it doth yield a wonderful kind of ſalt, as hereafter ſhall be taught.

The uſe of the white acid ſpirit of ſalt nitre.

THe heavy and corroſive ſpirit of ſalt nitre is not much uſed in Phyſick, though it be found almoſt in all Apothecaries ſhops, and there is kept for ſuch uſe, as above hath been mentioned of the ſpirit of vitriol, *viz.* to make their conſerves, and cooling-drinks taſt ſowriſh. Alſo it is uſed by ſome in the colick, but it is too great a corroſive, and too groſs to be uſed for that purpoſe; and although its corroſiveneſs may be mitigtated in ſome meaſure, by adding of water thereto, yet in goodneſs and vertue it is not comparable at all to the volatile ſpirit, but is as far different from it, as black from white, and therefore the other is fitteſt to be uſed in Phyſick; but this in dealing with metals and minerals, for to reduce them into vitriols, calxes, flores, and crocus.

Aqua Regis.

IF you diſſolve common ſalt (which hath been decrepitated firſt) in this acid ſpirit of ſalt nitre, & rectifie it by a glaſs retort in ſand) by a good ſtrong fire, it will be ſo ſtrong, that it is able to diſſolve gold, and all other metals and minerals, except ſilver and ſulphur; and ſeveral metals may by the means thereof be ſeparated much better than by that Aqua regia which hath been made by adding of Salt Armoniack. But if you rectifie it with *lapis calaminaris* or Zinck, it will be ſtronger yet, ſo as to be able to diſſolve all metals and Minerals (ſilver and ſulphur excepted) whereby in the handling of Metals, much more may be effected, than with common ſpirit of ſalt nitre or Aqua fortis, as hereafter ſhall be taught: and firſt in the preparing of gold.

The Preparation of Aurum Fulminans, or Aurum Tonitruans.

Jacob. p. 57.

TAke of fine granulated or laminated gold (whither it be refined by Antimony or *Aqua fortis*) as much as you pleaſe: put it in a little Glaſs body, and pour four or five times as much of *Aqua regis* upon it, ſet it ſtopt with a Paper in a gourd in warm ſand; and the *Aqua regis* within the ſpace of one or two hours will diſſolve the gold quite into a yellow water: but if it have not done ſo, it is a ſign that either the water was not ſtrong enough, or that there was too little of it for to diſſolve it. Then pour the ſolution from the gold,

which is not diſſolved yet, into another glaſs, and pour more of freſh *Aqua Regia* upon the gold: ſet it again to diſſolve in warm ſand or aſhes, and the remaining gold will likewiſe be diſſolved by it, and then there will remain no more, but a little white calx, which is nothing elſe but ſilver, which could not be diſſolved by the *Aqua Regia* (for the *Aqua Regia*, whether it be made after the common way with ſalt Armoniack, or elſe with common ſalt, doth not diſſolve ſilver) ſo in like manner common *Aqua fortis*, or ſpirit of ſalt nitre diſſolveth no gold; but all other metals are diſſolved as well by ſtrong *Aqua fortis* as by *Aqua Regia*. And therefore you muſt be careful to take ſuch gold as is not mixed with Copper, elſe your work would be ſpoiled: for if there were any Copper mixed with it, then that likewiſe would be diſſolved and precipitated together with the gold; and it would be a hindrance to the kindling or fulminating thereof: but if you can get no gold, that is without Copper, then take Ducats or Roſe-nobles, which ought to have no Addition of Copper, but only of a little Silver, which doth not hurt, becauſe that it cannot be diſſolved by the *Aqua Regia*, but remaineth in the bottom in a white powder. Make thoſe Ducats or Roſe-nobles red hot, and afterward bend them and make them up in Rolls, and throw them into the *Aqua Regia* for to diſſolve. All the gold being turned into a yellow water, and poured off, pour intoit by drops a pure oyl made of the Salt of Tartar, *per deliquium*, and the gold will be precipitated by the contrary liquor of Salt of Tartar into a brown yellow powder, and the ſolution will be clear. But you muſt take heed, to pour no more oyl of Tartar into it than is needful for the precipitation of the gold; elſe part of the precipitated gold would be diſſolved again, and ſo cauſe your loſs. The gold being well precipitated, pour off the clear water from the gold calx by inclination, and pour upon it warm rain or other ſweet water, ſtir it together with a clean ſtick of wood, and ſet it in a warm place, until the gold is ſettled, ſo that the water ſtandeth clear upon it again; then pour it off, and pour on other freſh water, and let it extract the ſaltneſs out of the gold calx: and this pouring off, and then pouring on of freſh water again, muſt be reiterated ſo often, until no ſharpneſs or ſaltneſs more be perceived in the water that hath been poured off: Then ſet the edulcorated gold into the Sun or another warm place for to dry. But you muſt take heed that it have no greater heat than the heat of the Sun is in *May* or *June*, elſe it would kindle or take fire, and (eſpecially if there be much of it) give ſuch a thunder-clap, that the hearing of thoſe that ſtand by, would be much endangered thereby, and therefore I advice you to beware, and cautious in the handling of it, leſt you run the hazard both of your gold and of your health by your over-ſight.

There is alſo another way for to edulcorate your precipitated gold, *viz.* thus, Take it together with the ſalt liquor, and pour it into a funnel lined with brown Paper laid double, and ſo let the water run through into a glaſs veſſel, whereupon the funnel doth reſt, and pour on other warm water, and let it run through likewiſe; do this again and again, until that the water come from it as ſweet as it was poured on. Then take the Paper with the edulcorated gold calx, out of the funnel, lay it, together with the paper, upon other brown paper lying ſeverally double together, and the dry paper will attract all the moiſtneſs out of the gold calx, ſo that the gold will be dryed the ſooner. Which being dry, take it out of the filtering paper, and put it into another that is clean, and ſo lay it aſide, and keep it for uſe. The ſalt water that came through by filtering, may be evaporated in a little glaſs body (ſtanding in ſand) to the dryneſs of the ſalt, which is to be kept from the air: for it is likewiſe uſeful in Phyſick; becauſe ſome vertue of the nature of gold is yet hidden in it: though one would not think it, in regard that it is ſo fair, bright and clear, which for all that may be obſerved by this, that when you melt it in a clean covered crucible or pot, and pour it afterward into a clean Copper morter or baſon (being firſt made warm) you get a purple-coloured ſalt, whereof 6, 9, 12, to 24. grains given inwardly, doth cleanſe and purge the ſtomach and bowels, and eſpecially it is uſeful in feavers and other diſeaſes of the ſtomach. But in the crucible, out of which the ſalt hath been poured, you will find an earthy ſubſtance, which hath ſeparated it ſelf from the ſalt, and looketh yellowiſh; this being taken out and melted in a little crucible by a ſtrong fire, turneth to a yellow glaſs, which is impregnated with the Tincture of Gold, and doth yield a grain of Silver in every regard like unto common cupellated ſilver, wherein no gold is found, which is to be admired: becauſe that all Chymiſts are of opinion, that no *Aqua regia* can diſſolve ſilver which is true. The queſtion therefore is, from whence or how this ſilver came into the ſalt, ſince no *Aqua Regia* doth diſſolve ſilver? whereupon ſome perchance may anſwer, that it muſt have been in the oyl of Tartar, in regard that many do believe, that the ſalts likewiſe may be turned into metals, which I do not gainſay, but only deny that it could have been done here; for if that ſilver could have been exiſtent in the *Aqua Regia*, or ſalt of Tartar (whereas *Aqua Regia* cannot bear any) it would have been precipitated together with the gold. But that it was no common ſilver, but gold which turned to ſilver after it was deprived of its Tincture, I ſhall briefly endeavour to prove. For that the ſalt waters (of *Aqua Regia* and ſalt of Tartar) out of which the gold hath been precipitated, is of that nature, before it be coagulated to ſalt, though it be quite clear and white, that if you put a feather in it, it will be dyed purple within few days, which purple colour comes from the gold, and not from ſilver, in regard that ſilver doth dye red or black: and hence it appeareth, that the ſalt water hath retained ſomething of gold.

Now ſome body peradventure may ask, if that the ſaid ſalt water hath retained ſome gold, how is it then, that in the melting, no gold comes forth, but only ſilver? To which I anſwer, that ſome ſalts are of that nature, that in the melting, they take from gold its colour and ſoul; whereof if the gold be truly deprived, it is then no more gold, nor can be ſuch; neither is it ſilver, but remaineth only a volatile black body, good for nothing, which alſo proveth much more unfixt than common Lead, not able to endure any force of fire, much leſs the cupel: But like *Mercury* or *Arſenick* vaniſheth (or flyeth away) by a ſmall heat. Hence it may be gathered, that the fixedneſs (or fixity) of gold doth conſiſt in its ſoul or Tincture, and not in its body, and therefore it is credible, that gold may be anatomized,

mized, its beſt or purer part ſeparated from the groſſer (or courſer) and ſo that a Tingent medicine (or Tincture) may be made of it. But whether this be the right way, whereby the univerſal medicine of the ancient Philoſophers (by whoſe means all metals can be changed or tranſmuted into gold) is to be attained unto, I will not diſpute; yet I believe that peradventure there may be another ſubject, endued with a far higher Tincture than gold is, which obtained no more from nature, than it doth need it ſelf for its own fixedneſs. However, we may ſafely believe, that a true Anima or Tincture of gold, if it be well ſeparated from its impure black body, may be exalted and improved in colour; ſo that afterwards of an imperfect body a greater quantity, than that was from which it was abſtracted, may be improved and brought to the perfection of gold. But waving all this, it is true and certain, that if the gold be deprived of its Tincture, the remaining body can no more be gold; as is demonſtrated more at large in my Treatiſe (*de Auro potablili vero*) of the true potable Gold: And this I mentioned here onely therefore, that in caſe the lover of this Art, in his work ſhould meet perchance with ſuch a white grain, he may know, from whence it doth proceed.

I could have forborn to ſet down the preparation of the fulminating gold, and ſo ſave paper and time, in regard that it is deſcribed by others: but becauſe I promiſed in the firſt part to teach how to make the flores of gold, and that thoſe are to be made out of fulminating (or thundring) gold, I thought it not amiſs to deſcribe its preparation, that the lover of this Art need not firſt have his recourſe to another book for to find out the preparation, but by this my book may be furniſhed with a perfect inſtruction for the making of the flores of gold, and this is the common way for to make *Aurum fulminans*, known unto moſt Chymiſts; but in regard that eaſily an error may be committed in it, either by pouring on too much of the liquor of Tartar (eſpecially when it is not pure enough, ſo that not all the gold doth precipitate, but part of it remaineth in the ſolution, whereby you would have loſs; or elſe, the gold falling or precipitating into a heavy calx, which doth not fulminate well, and is unfit for to be ſublimed into flores.

Therefore I will here ſet down another and much better way, whereby the gold may be precipitated quite and clean out of the *Aqua Regia* without the leaſt loſs, and ſo that it cometh to be very light and yellow, and doth fulminate twice as ſtrong as the former, and there is no other difference between this and the former preparation, but only that inſtead of the oyl of Tartar, you take the ſpirit of urine, or of ſalt armoniack for to precipitate the diſſolved gold thereby; and the gold (as before ſaid) will be precipitated much purer, than it is done by the liquor of the ſalt of Tartar, and being precipitated, it is to be edulcorated and dryed, as above in the firſt preparation hath been taught.

The uſe of Aurum fulminans.

THere is little to write of the uſe of *Aurum fulminans* in phyſick; for becauſe it is not unlockt, but is only a groſs calx and not acceptable to the nature of man, it can do no miracle. And although it be uſed to be given *per ſe* from 6, 8, 12. grains to ℈ i. for to provoke ſweating in the Plague, and other malignant feavers, yet it would never ſucceed ſo well as was expected. Some have mixed it with the like weight of common ſulphur, and made it red hot (or calcined it) whereby they deprived it of its fulminating vertue, ſuppoſing thus to get a better medicine, but all in vain, for the gold calx would not be amended by ſuch a groſs preparation. But how to prepare a good medicine out of *Aurum fulminans*, ſo that it may be evidently ſeen, that the gold is no dead body, nor unfit for phyſick, but that it may be made quick and fit for to put forth or ſhew forth thoſe vertues which it pleaſed God to treaſure up in it, I ſhall here briefly diſcover.

Firſt, get ſuch an inſtrument (as above hath been taught) made for you out of Copper, but not too big, nor with a lid at the top, but only with a pipe, unto which a receiver may be applyed, which muſt not be luted to it; but it ſufficeth, that the pipe enter far into the belly of the receiver; and at the lower part it muſt have a flat bottom, that it may be able to ſtand: over the bottom there muſt be a little hole with a little door, that cloſeth very exactly: and there muſt be alſo two little plates or ſcales of ſilver or copper, as big as the nail of ones finger, whereupon the *Aurum fulminans* is to be ſet into the Inſtrument; which is to ſtand upon a Trevet, under which you are to lay ſome burning Coals for to warm or heat the bottom withal. The Inſtrument together with the glaſs Receiver being ſo ordered, that it ſtands faſt, and alſo the bottom thereof being warmed or heated, then with little pincers one of the little ſcales, containing 2, 3, or 4. grains of *Aurum fulminans* muſt be conveyed upon the Inſtrument ſet upon the warm bottom, and then ſhut the little door, and when the gold doth feel the heat, it kindleth and giveth a clap, and there is cauſed a ſeparation, and eſpecial unlocking of the gold; for as ſoon as the clap is done, the gold doth go through the pipe like a purple coloured ſmoak into the receiver, and ſticks on every where like a purple coloured powder. When the ſmoak is vaniſhed, which is ſoon done, then take the empty ſcale out of the Inſtrument or Oven, and ſet it with the gold, which will likewiſe fulminate and yield its flores. Then the firſt being cooled in the mean time, is to be filled again and put in, inſtead of that which is empty, and taken out, putting in one ſcale after another by turns, continue it ſo long till you have got flores enough: After the ſublimation is performed, let the Copper Veſſel grow cool, and then ſweep or bruſh the gold powder which is not ſublimed with a haires foot, or gooſe feather out of the veſſel, which powder ſerves for nothing, but to be melted with a little borax, and it will be good gold again, but onely ſomewhat paler than it was before it was made into fulminating gold. But the flores in the receiver cannot be bruſhed out thus, eſpecially when they are caſt in with an addition of ſalt Nitre, as by the flores of ſilver hereafter ſhall be taught, becauſe they are ſomething moiſt, and therefore pour in as much of dephlegmed Tartariſed ſpirit of wine unto it, as you think to be enough, for to waſh off the flores with. This done, pour out the ſpirit of wine,

together with the burnt Phœnix into a clean glaſs, with a long neck, ſet it (being well luted firſt) into a gentle Balneum, or into warm aſhes for ſome dayes, and the ſpirit of wine in the mean time will be coloured with a fair red, which you muſt pour off and then pour on other freſh ſpirit and ſet it in a warm place for to be diſſolved, this being likewiſe coloured, put both the extracts together in a little glaſs body, and abſtract the ſpirit of wine (in Balneo) from the Tincture, which will be a little in quantity, but of a high red colour and pleaſant in taſte. The remaining flores from which the Tincture is extracted, may be with water waſhed out of the glaſs, and then dryed if they are to be melted; and they will yield a little pale gold, and the moſt part turneth into a brown glaſs, out of which perchance ſomething elſe that is good may be made, but unknown to me as yet.

N. B. If you mix the *Aurum fulminans* with ſome ſalt nitre, before fulmination, then the flores will be the more ſoluble, ſo that they yield their Tincture ſooner and more freely, than alone of themſelves; and if you pleaſe, you may adde thereto thrice as much ſalt nitre, and ſo ſublime them in flores, in the ſame manner, as ſhall be taught for the making of the flores of ſilver.

The uſe of the Tincture of Gold.

THe extracted Tincture is one of the chiefeſt of thoſe medicines, which comfort & cheer up the heart of man, renew and reſtore to youthfulneſs, and cleanſe the impure blood in the whole body, whereby many horrible diſeaſes, as the leproſie, the pox, and like may be rooted out.

But whether this Tincture by the help of fire may be further advanced into a fixed ſubſtance I do not know: for I have not proceeded further in it, than here is mentioned.

Of the flores of ſilver and of its medicine.

HAving promiſed in the firſt part of this book (when I was deſcribing the preparation of flores out of Metals) to teach in the ſecond part to make the flores of gold and ſilver, thoſe of gold being diſpatcht; there followeth now in order after the gold, to ſpeak alſo of ſilver and of its preparation, which is to be thus performed.

Take of thin laminated or ſmall granulated fine ſilver as much as you pleaſe, put it into a little ſeparating glaſs body, and pour upon it twice as much in weight of rectified ſpirit of ſalt nitre, and the ſpirit of ſalt nitre will preſently begin to work upon the ſilver and to diſſolve it. But when it will not diſſolve any more in the cold, then you muſt put the glaſs body into warm ſand or aſhes, and the water will preſently begin to work again; let the glaſs ſtand in the warm aſhes, until all the ſilver be diſſolved. Then put the ſolution out of the little glaſs body, into another ſuch as is cut off at the top, and put on a little head or Limbeck, and in ſand abſtract the moity of the ſpirit of ſalt nitre from the diſſolved ſilver; then let the glaſs body remain in the ſand till it be cool; after take it out, and let it reſt for a day and a night, and the ſilver will turn into white foliated cryſtals, from which you muſt pour off the the remaining ſolution which is not turned; and from thence abſtract again the moity of the ſpirit, and let it ſhoot or turn in a cold place; and this abſtracting and cryſtalliſing you are to reiterate, until almoſt all the ſilver is turned to Cryſtals; which you muſt take out and lay upon filtring paper to dry, and ſo keep it for ſuch further uſe, as hereafter ſhall be taught. The remaining ſolution, which is not cryſtalliſed, you may in a copper veſſel by adding of ſweet water thereto, precipitate over the fire into a calx, and then edulcorate and dry it, and keep it for other uſe, or elſe melt it again into a body. Or elſe you may precipitate the ſame with ſalt water, and ſo edulcorate and dry it; and you will have a calx, which doth melt by a gentle fire, and is of a ſpecial nature. and in the ſpirit of urin, of ſalt Armoniack, of Harts-horn, of Amber, of Soot, and of hair it doth eaſily diſſolve; and it may be prepared or turned into good medicines, as ſhortly in our treating of the ſpirit of urin ſhall be taught. Or elſe, you may chooſe not to precipitate the remaining ſolution of ſilver, but with the ſpirit of urin to extract an excellent Tincture, as hereafter ſhall be taught.

If you keep them, they must be put into a Glaſs Bottle well ſtopt

Of the uſe of the cryſtals of ſilver.

THeſe cryſtals may ſafely be uſed in Phyſick alone by themſelves 3, 6, 9, 12. graines thereof being mixed with a little ſugar, or elſe made up into pills; they do purge very gently and without danger; but by reaſon of their bitterneſs they are ſomewhat untoothſome to take; alſo, if they be not made up into pills, they colour the lips, tongue and mouth quite black (but the reaſon of that blackneſs belongeth not to this place to treat of, but ſhall by and by follow hereafter) Alſo if they touch metals, as Silver, Copper and Tin, they make them black and ugly, and therefore they are not much uſed. But if you put into the ſolution of ſilver (before it be reduced into Cryſtals) half as much quickſilver as there was of the ſilver, and ſo diſſolve them together and afterwards let them ſhoot together, there will come forth very fair little ſquare ſtones like unto Allome, which do not melt in the air, as the former foliated ones uſe to do; neither are ſo bitter, and they purge alſo quicker and better, than thoſe that are made only of ſilver.

How to ſublime the Cryſtals of ſilver into flores, and then to make a good Medicine of the flores.

TAke of the foliated Cryſtals of Silver as many as you pleaſe, and upon a grinding ſtone made warm firſt, grind as much purified and well dryed ſalt nitre amongſt it, then put into your Iron diſtilling veſſel (to the pipe whereof there is to be applyed and luted a great receiver) coles made into powder two inches high, and make a fire under it, that the veſſel every where together with the coles that are in it, become red hot. Then take off the lid, and with a ladle throw in at once of your Cryſtals of ſilver 3 i. more or leſs, according as you think that your receiver in regard of its bigneſs is able to bear. This done, preſently put on the lid, and the ſalt nitre together with the cryſtals of ſilver will be kindled by the coles that lye on the bottom of the veſſel, and there will come forth a white ſilver fume through the pipe into the receiver, and after a while when the cloud is vaniſhed in the receiver, caſt in more, and continue this ſo long, and until all your prepared ſilver is caſt in; then let it cool, and take off the receiver, and pour into it

good

good Alcolized ſpirit of wine, and waſh the flores with it out of the receiver, and proceed further with them, as above you have been taught to proceed with the gold, and you will get a greeniſh liquor, which is very good for the brain.

Take the coles out of the diſtilling veſſel, and make them into fine powder, and waſh them out with water, to the end that the light cole-duſt may be got from it, and you will find much ſilver duſt (or a great many little ſilver grains) which the ſalt nitre could not force over, which you may reduce, for it will be good ſilver.

There may alſo be made a very good medicine out of the cryſtals of ſilver, which will be little inferior to the former, whereby the diſeaſes and infirmities of the brain may be very well remedied, which is done thus.

How to make a green oyl out of Silver.

POur upon Cryſtals of ſilver twice or thrice as much (in weight) of the ſtrongeſt ſpirit of Salt Armoniack, put it in a glaſs with a long neck well cloſed, into a very gentle warmth for the ſpace of 8. or 14. days in digeſtion, and the ſpirit of ſalt Armoniack will be tinged with a very fair blew colour from the ſilver, then pour it off, and filtre it through brown paper, and then put it in a little glaſs retort or glaſs body, and abſtract in Balneo by a gentle fire, almoſt all the ſpirit of ſalt Armoniack (which is ſtill good for uſe) and there will remain in the bottom a graſs-green Liquor, which is to be kept for a Medicine.

But in caſe that you ſhould miſs, and abſtract too much of the ſpirit from the Tincture of ſilver, ſo that the Tincture be quite dry and turned to a green Salt, then you muſt pour upon it again as much of the ſpirit of Salt Armoniack, as will diſſolve the green ſalt again to a green Liquor, but if you deſire to have the Tincture purer yet, then abſtract all moiſtneſs from it, to a ſtony dryneſs: upon which you muſt pour good ſpirit of Wine, which will quickly diſſolve the ſtone, and then filtre it, and there will remain feces, and the Tincture will be fairer: from which you muſt abſtract moſt of the ſpirit of wine, and the Tincture will be ſo much the higher in vertue. But if you pleaſe, you may diſtil that green ſalt or ſtone (before it be extracted again with that ſpirit of wine) in a little glaſs retort, and you will get a ſubtile ſpirit and a ſharp oyl, and in the bottom of the retort there remaineth a very fuſile ſilver which could not come over.

It is to be admired, that when you pour ſpirit of ſalt Armoniack, or ſpirit of wine upon that ſtone, for to diſſolve it, that the glaſs comes to be ſo cold by it, that you hardly are able to endure it in your hand, which coldneſs in my opinion cometh from the ſilver (being ſo well unlockt) which naturally is cold.

The Uſe of the green Liquor in Alchymy, and for Mechanical Operations.

THis green Liquor ſerveth not only for a medicine, but alſo for other Chymical operations (for both Copper and glaſs may be eaſily and very fairly ſilvered over therewith) very uſeful for thoſe that are curious and love to make a ſhew with fair houſhold-ſtuff; for if you get diſhes, trencher-plates, ſalters, cups and other veſſels made of glaſs, after the ſame faſhion as thoſe of ſilver uſe to be made, you may very eaſily and without any conſiderable charge ſilver them over therewith within and without, ſo that by the eye they cannot be diſcerned from true ſilver plate.

Beſides the above-related good Medicines, there may be made another and eſpecial good one out of the cryſtals of ſilver, *viz.* diſſolving and digeſting them (for a ſpace of time) with the univerſal water, which hath been diſtilled by nature it ſelf; and is known to every body: and after its digeſting for a ſhort time, and change into ſeveral colours, there will be found a pleaſant eſſence, which is not ſo bitter as the above-deſcribed green liquor, which is not brought yet by heat to ripeneſs and maturation. ℞

N. B. In this ſweet univerſal Menſtruum, may alſo all other metals by a ſmall heat and the digeſtion of a long time be ripened and fitted for Medicines (having firſt been reduced into their vitriols and ſalts) and then they are no more dead bodies, but by this preparation have recovered a new Life, and are no more the metals of the covetous, but may be called the metals of the Philoſophers, and of the Phyſicians.

Beſides Phyſick or phyſical uſe.

LAſtly, there may be many pretty things more effected (beſides the medicinal uſe) by means of the Cryſtals of ſilver, *viz.* when you diſſolve them in ordinary ſweet rain water, you may dye beards, hair, skin, and nails of men or beaſts into carnation or pink red, brown and black, according as you have put more or leſs thereof in the water; or elſe, according as the hair was more or leſs times wetted therewith, whereby the aſpect of Man and Beaſt (which ſometimes in ſeveral occaſions may not be contemned) is changed, ſo that they cannot be known.

This colouring or dye may be alſo performed with Lead or Mercury no leſs than with ſilver, but otherwiſe prepared, whereof in the fourth part.

Now I have taught how to make flores and tinctures of gold and ſilver by help of the acid ſpirit of Nitre. There may be many other medicines taught to be made out of them, but in regard that they belong not to this place, they ſhall be reſerved for other places of this ſecond, and alſo for the other following parts.

As by the help of the ſpirit of Nitre, good Medicines may be made out of gold and ſilver, ſo the like may be done out of other inferiour metals. But in regard that their deſcription is fitter for other places of this Book, I omit them here. Yet nevertheleſs, I thought good to deſcribe one preparation of every metal; after Silver therefore followeth now Copper.

A medicine out of Copper externally to be uſed.

DIſſolve burnt plates of Copper in ſpirit of ſalt, and abſtract the ſpirit again from thence to a dryneſs, but not too hard, and there will a green maſs remain behind, which you may caſt in by little and little, and ſo diſtil it, as of ſilver hath been taught. It doth yield a ſtrong and powerful ſpirit, and flores alſo for outward uſe in putrid

wounds, to lay a good ground thereby for the healing.

A medicine out of Iron or Steel.

IN the ſame manner you may proceed with iron and ſteel, and there will remain behind a good crocus of a great ſtipticity or aſtringency, eſpecially out of iron or ſteel, and may with good ſucceſs be mixed with oyntments and plaiſters.

Of Tin and Lead.

IF Tin or Lead be diſſolved therein, after the abſtracting of part of the ſpirit, they will ſhoot into clear and ſweet cryſtals. But Tin is not ſo eaſily diſſolved as Lead; both may ſafely be uſed for medicines. Alſo there may be ſpirits and flores got out of them by diſtilling. The rehearſing of the Preparation is needleſs, for what for the preparing of ſilver hath been taught, is to be underſtood alſo of other metals.

The uſe of the Cryſtals of Lead and Tin.

THE Cryſtals of Lead are admirably good to be uſed in the plague for to provoke ſweating and expel the venome out of the body; they may alſo with credit be uſed in the bloody flux. Externally diſſolved in water, and clothes dipt therein and applied, they excellently cool and quench all inflammations, in what part of the body ſoever they do befal. Likewiſe the ſpirit thereof uſed *per ſe* (and the flores mixed among oyntments) do their part ſufficiently.

But the cryſtals of Tin do not prove altogether ſo quick in operation, though they do act their part alſo, and they are more pleaſant than thoſe that are made of Lead; for in Tin there is found a pure ſulphur of gold; but in Lead a white ſulphur of ſilver, as is proved in my *Treatiſe of the generation and nature of Metals*.

Of Mercury.

WHen you diſſolve common Mercury in rectified ſpirit of Nitre, and abſtract the ſpirit from it again, then there will remain behind a fair red gliſtering precipitate; but when the ſpirit is not rectified, it will not be ſo fair, becauſe that the impurity of the ſpirit remains with the Mercury and pollutes it. This calcinated Mercury is called by ſome *Mercurius præcipitatus*, and by others *Turbith minerale*, wherewith the Surgeons, and ſometimes other unskilful Phyſicians do cure the Pox; they give at once 6, 8, 10. grains, (more or leſs) according to its preparation and force in operation to the patient; for if the ſpirit be not too much abſtracted from it, it worketh much ſtronger, than when by a ſtrong fire it is quite ſeparated from it; for the ſpirits that remain with the Mercury make it quick and active, which elſe without the ſpirits would not be ſuch.

The other metals alſo, if they be not firſt made ſoluble by ſalts or ſpirits, can perform either none or but very ſmall operation, unleſs it be Zink or Iron, which being eaſily ſoluble, are able to work without any foregoing diſſolution, as hath been ſhewn above, when we treated of the oyl of vitriol. But that the ſharp ſpirits are the cauſe of that operation, may hence be perceived, and made manifeſt; that although you take ℥ ſs. of quick-ſilver and pour it down into the ſtomach, yet it would run out again beneath, as above it was poured in. But if it be prepared with ſpirits or ſalts, then but few grains of it will work ſtrongly, and the more it is made ſoluble, the ſtronger it worketh; as you may ſee when it is ſublimed from ſalt and vitriol, that it groweth ſo ſtrong thereby, that one grain doth work more than eight or ten grains of Turbith Mineral, and three or four grains thereof would kill a man, by reaſon of its mighty ſtrength. Alſo it worketh extreamly, and much more than the ſublimate, when it is diſſolved in ſpirit of Nitre and cryſtalized, ſo that you cannot well take it upon your tongue without danger. Which ſome perceiving, evaporate the *Aqua fortis* by a gentle heat from it, ſo that the *Mercurius* remained yellow, which in a ſmaller doſe wrought more than the red, from which the ſpirits were quite evaporated. And they uſed it only externally, ſtrewing it into impure ſores, for to corrode or fret or away the proud fleſh, not without great pain to the patient: but alſo without diſtinction of young or old gave it inwardly for to purge; which is one of the moſt hurtful Purges that can be uſed. For this evil gueſt, however he be prepared, cannot leave his tricks, unleſs he be reduced into ſuch a ſubſtance, as that it never can be brought back to a running Mercury, for then much good can be done in phyſick without any hurt or prejudice to the health of man, whereof perchance ſomething more ſhall be ſaid in another place.

I cannot omit for the benefit of young innocent Children, to diſcover a great abuſe. For it is grown very common almoſt among all that deal in phyſick, that as ſoon as a little child is not well before they know whether it will be troubled with worms, or with any thing elſe, they preſently fall upon Mercury, ſuppoſing that in regard it hath no taſte, it is ſo much the better for to get the Children to take it for to *kill* the Worms.

But thoſe men do not know the hurtful nature of it, which it doth ſhew againſt the ſinews and Nerves: For ſome are of opinion, that if they know to prepare Mercury ſo, that it can be given in a greater doſe (as is to be ſeen in ſublimed *Mercurius dulcis*) that then it is excellently prepared: but they are in a great errour, and it were much better, it were not ſo well prepared, that the leſs hurt might be done to Man, in regard that then they durſt not give it in ſo great a doſe. For if that which is prepared with *Aqua fortis* or ſpirit of ſalt nitre be uſed in the pox to men that are advanced in years, it cannot do ſo much hurt, becauſe it is given in a ſmall doſe, and doth work with them, whereby nature gets help for to overcome and expel that hurtful venome, and its malignity is abated by the ſtrong ſalivation, which provident nature hath planted in it, ſo that not ſo much miſchief can come by it, as by *Mercurius dulcis*, whereof is given to little weak Children from ten to thirty grains at once, which commonly (unleſs they be of a ſtrong nature, and do grow it out) doth cauſe a weakneſs and lameneſs in their limbs, ſo that (if they do not come to be quite lame at laſt) they have a long time to ſtruggle withal, till they overcome it.

In like manner thoſe alſo do err, which do ſhake Mercury in water or beer ſo long, until the water come to be gray-coloured, and ſo give that water or beer to little children to drink for the Worms, pretending that they do not give the ſubſtance or body of Mercury, but only its vertue. But this groſs

preparation

Preparation is no better than if they had miniſtred the running Mercury it ſelf. Neither have I ever ſeen that the uſe of *Mercurius dulcis*, or of the gray coloured water was ſeconded with good ſucceſs in killing of the Worms. But it is credible, that it may be done by yellow or red precipitate, in regard of its ſtrong operation. But who would be ſuch an Enemy to his Child, as to plague and torture it with ſuch a hurtful and murthering medicine; eſpecially there being other medicines to be had, which do no harm to the children, as is to be found in iron or ſteel, and the ſweet oyl of vitriol.

And ſo much of the abuſe of Mercury: I hope it will be a good warning unto many, ſo that they will not ſo eaſily billet ſuch a tyrannical gueſt in any ones houſe, whereby the ruine thereof of neceſſity muſt follow. And that cure deſerveth no praiſe at all, whereby one member is cured with the hurt of two or three other members. As we ſee by the Pox, when one infected member is cured by Mercury, and that but half, and not firm at all, that all the reſt of the body is endangered thereby for the future. And therefore it would be much better that ſuch crude horſe-phyſick might be ſevered from good medicaments, and ſuch uſed inſtead of them, as may firmly, ſafely, and without prejudice to other parts perform the cure, of which kind ſeveral are taught in this book. But in caſe that you have Patients, which have been ſpoiled by ſuch an ill-prepared Mercury, then there is no better remedy to reſtore them, than by medicines made of metals, wherewith Mercury hath great affinity, as of gold and ſilver: for when they are often uſed, they attract the Mercury out of all the members, and carry it along with them out of the body, and ſo do rid the body thereof. But externally the precipitated Mercury may more ſafely be uſed, than internally, in caſe there be nothing elſe to be had, *viz.* to corrode or eat away the proud fleſh out of a wound. But if inſtead of it there ſhould be uſed the corroſive oyl of Antimony, Vitriol, Allome or common ſalt it would be better, and the cure much the ſpeedier; and it would be better yet, that in the beginning good medicaments were uſed to freſh wounds, and not by careleſneſs to reduce them to that ill condition, that afterwards by painful corroſives they muſt be taken away. But ſuch a Mercury would ſerve beſt of all for ſouldiers, beggers, and children that go to ſchool; for if it be ſtrewed upon the head of children, or into their cloathes, no louſe will abide there any longer. In which caſe Mercury muſt by his preparation not be made red, but onely yellow, and it muſt be uſed warily, and not be ſtrewed on too thick, leſt the fleſh be corroded, which would be the occaſion of great miſchief.

Of Aqua fortis.

OUt of Salt nitre and vitriol, taking of each a like quantity (or if the water is to be not altogether ſo ſtrong) two parts of vitriol to one part of ſalt-nitre, a water diſtilled is good to diſſolve metals therewith, and to ſeparate them from one another; as gold from ſilver, and ſilver from gold, which in the fourth part punctually ſhall be taught.

The *Aqua fortis* ſerveth alſo for many other Chymical operations to diſſolve and fit metals thereby, that they may be reduced the eaſier into medicaments: but becauſe the ſpirit of ſalt nitre and *Aqua fortis* are almoſt all one, and have like operations: for if the *Aqua fortis* be dephlegmed and rectified, you may perform the ſame operations with it, which poſſibly may be performed with the ſpirit of ſalt nitre; and on the other ſide the ſpirit of ſalt nitre will do all that can be done with the *Aqua fortis*, whereof in the fourth Part ſhall be ſpoken more at large.

Now I know well that ignorant laborators (which do all their work according to cuſtome, without diving any further into the Nature of things, will count me an Heretick (becauſe I teach, that the *Aqua fortis* made of vitriol and ſalt nitre is of the ſame nature and condition with the ſpirit of ſalt nitre, which is made without vitriol) ſaying that the *Aqua fortis* doth partake likewiſe of the ſpirit of vitriol, becauſe vitriol alſo is uſed in the preparation of it. To which I anſwer, that although vitriol be uſed in the preparation of it, yet for all that in the diſtilling, nothing or but very little of its ſpirit comes over with the ſpirit of ſalt nitre, and that by ſo ſmall a heat it cannot riſe ſo high, as the ſpirit of ſalt nitre doth: and the vitriol is added onely therefore unto the ſalt nitre that it may hinder its melting together, and ſo the more facilitate its going into a ſpirit. And the more to be convinced of this truth, the unbelieving may add to ſuch ſpirit of ſalt nitre, as is made by it ſelf, a little of oyl of vitriol likewiſe made by it ſelf, and try to diſſolve ſilver guilded with it, and he will find that his ſpirit of ſalt nitre by the ſpirit of vitriol is made unfit to make a ſeperation; for it preyeth notably upon the gold, which is not done by *Aqua fortis*.

Of the ſulphuriſed ſpirit of ſalt nitre.

THere may alſo be made a ſpirit of ſalt nitre with ſulphur, which is ſtill in uſe with many, *viz.* they take a ſtrong earthen retort, which hath a pipe at the top, and faſten it into a furnace, and having put ſalt nitre into it, they let it melt, and then through the pipe they throw peeces of ſulphur of the bigneſs of a pea, one after another, which being kindled, together with the nitre doth yield a ſpirit called by ſome ſpirit of ſalt nitre, and by others oyl of ſulphur, but falſely; for it is neither of both, in regard that metals cannot be diſſolved therewith as they are done with other ſpirit of ſalt nitre or ſulphur; neither is there any great uſe for it in phyſick, and if it were good for any Chymical operations, by the help of my diſtilling inſtrument might eaſily be made and in great quantity.

N. B. But if ſalt nitre be mixed with ſulphur in due proportion, and in the firſt furnace be caſt upon quick coles, then all will be burnt, and a ſtrong ſpirit cometh over, whoſe vertue is needleſs here to deſcribe; but more ſhall be mentioned of it in another place.

Of the Cliſſus.

AMong the Phyſitians of this latter age, there is mention made of another ſpirit, which they make of Antimony, Sulphur, and ſalt nitre, a like quantity taken of each, which they call *Cliſſus*, and which they have in high eſteem, and not without cauſe, becauſe it can do much good, if it be well prepared.

The inventor, for the making thereof uſed a retort with a pipe, as was mentioned by the ſulphurized ſpirit of ſalt nitre, through which pipe he threw in his mixture. And it is a good way if no better be known: but if the Author had known my invention and way of diſtilling, I doubt not but he would have ſet aſide his, that hath a noſe or pipe retort, and made uſe of mine.

The materials indeed are good, but not the weight or proportion; for to what purpoſe ſo great a quantity of ſulphur, it being not able to burn away all with ſo ſmall a quantity of ſalt nitre. And if it doth not burn away, but only ſublime & ſtop the neck of the retort, whereby the diſtillation is hindered, how can it then yield any vertue? Therefore you ought to take not ſo much ſulphur, but only ſuch a quantity as will ſerve to kindle the ſalt nitre, *viz.* to ℔ i. of ſalt nitre four drams of ſulphur: but becauſe Antimony alſo is one of the ingredients, which hath likewiſe much ſulphur (for there is no Antimony ſo pure, but it containeth much combuſtible ſulphur, as in the fourth part of this book ſhall be proved:) therefore it is needleſs to add ſo much ſulphur unto Antimony, to make it burn, becauſe it hath enough of it ſelf. And therefore I will ſet down my compoſition, which I found to be better than the firſt.

Take Antimony ℔ i. ſalt nitre ℔ i j. ſulphur ʒ i i j. the materials muſt be made into ſmall powder and well mixed, and at once caſt in ʒ i j. thereof, and there will come over a ſulphureous acid ſpirit of Antimony, which will mix it ſelf with the water, which hath been put before in the receiver; which after the diſtillation is finiſhed muſt be taken out and kept cloſe for its uſe. It is a very good diaphoretick (or ſweat provoking) medicine eſpecially in feavers, the plague, epilepſie, and all other diſeaſes, whoſe cure muſt be performed by ſweating. The *Caput Mortuum* may be ſublimed into flores in that furnace, which is deſcribed in the firſt part.

Of the Tartariſed ſpirit of nitre.

IN the very ſame manner there may alſo be diſtilled a good ſweat-provoking ſpirit out of ſalt nitre and Tartar, a like quantity taken of each, which is very good to be uſed in the plague and malignant feavers.

The *Caput Mortuum* is a good melting powder for to reduce the calxes of metals therewith; or elſe you may let it diſſolve in a moiſt place to oyl of Tartar.

Of the Tartariſed ſpirit of Antimony.

A Much better ſpirit yet may be made of Tartar, ſalt nitre, and Antimony, a like quantity being taken of each and made into fine powder, and mixed well together, which though it be not ſo pleaſant to take, is therefore not to be deſpiſed. For not only in the plague and feavers, but alſo in all obſtructions and corruptions of blood it may be uſed with admiration of its ſpeedy help.

The *Caput Mortuum* may be taken out, and melted in a crucible, and it will yield a *Regulus*, the uſe whereof is deſcribed in the fourth part. Out of the ſcoria or droſs a red Tincture may be extracted with ſpirit of wine, which is very uſeful in many diſeaſes. But before you extract with ſpirit of wine, you may get a red lixivium out of it with ſweet water, which lixivium may be uſed externally for to mend the faults of the skin and to free it from ſcabbineſs.

Upon this lixivium if you pour Vinegar or any other acid ſpirit, there will precipitate a red powder, which if it be edulcorated and dryed may be uſed in phyſick. It is called by ſome ſulphur *auratum diaphoreticum*: but it is no Diaphoretick, but maketh ſtrong vomits, and ſo in caſe of neceſſity, when you have no better medicine at hand, it may be uſed for a vomitory from 6, 7, 9, 10, 15.

Alſo out of the ſcoria there may be extracted a fair Sulphur with the ſpirit of urin and diſtilled over the Limbeck, which is very good for all diſeaſes of the lungs.

Of Stone-coles.

IF you mix ſtone-coales with a like quantity of ſalt nitre, and diſtill them, you will get an admirable ſpirit and good to be uſed outwardly; for it cleanſeth and conſolidateth wounds exceedingly, and there will alſo come over a metallical vertue in the form of a red powder, which muſt be ſeparated from the ſpirit, and kept for its uſe. But if you caſt in ſtone-coles alone by themſelves, and diſtill them, there will come over not only a ſharp ſpirit, but alſo a hot and blood red oyl, which doth powerfully dry and heal all running ulcers; eſpecially it will heal a ſcald head better than any other medicine, and it doth conſume alſo all moiſt and ſpongious excreſcencies in the skin, where ever they be: but if you ſublime ſtone-coles in the furnace deſcribed in the firſt part, there comes over an acid metallical ſpirit, and a great deal of black light flores, which ſuddenly ſtanch bleeding, and uſed in plaiſters, are as good as other metallical flores.

Of the Sulphureous ſpirit of ſalt nitre or Aqua fortis.

IF you take one part of ſulphur, two parts of nitre, and three parts of vitriol, and diſtill them, you will get a graduating *Aqua fortis*, which ſmelleth ſtrongly of ſulphur; for the ſulphur is made volatile by the ſalt nitre and vitriol. It is better for ſeparating of metals, than the common *Aqua fortis*.

If ſilver be put in, it groweth black, but not fixed; ſome of it poured into a ſolution of ſilver a great deal of black calx will precipitate, but doth not abide the tryal. You may alſo abſtract a ſtrong *ſulphureous* volatile ſpirit from it, which hath like vertue as well internally as externally for bathes, and may be uſed like unto a volatile ſpirit of Vitriol or Allome.

Of the Nitrous ſpirit of Arſenick.

IF you take white Arſenick and pure ſalt nitre of each a like quantity ground into fine powder, and diſtill them, you will get a blew ſpirit, which is very ſtrong, but no water muſt be put into the receiver, elſe it would turn white, for the Arſenick, from which the blew cometh, is precipitated by the water. This ſpirit diſſolveth and graduateth copper as white as ſilver, and maketh it malleable but not fixed. The remaining *Caput Mortuum* maketh the copper white, if it be cemented therewith, but very brittle and unmalleable, but how to get good ſilver out of Aſenick and with profit, you ſhall find in the fourth part. In phyſick the blew ſpirit ſerveth for all corroding cancrous ſores, which if they be anointed therewith, will be killed thereby, and made fit for healing.

To make a ſpirit of Sulphur, crude Tartar and Salt nitre.

IF you grind together one part of Sulphur, two parts of Crude Tartar, and four parts of ſalt nitre, and diſtill it Philoſopher-like, you will get a moſt admirable ſpirit, which can play his part both in Phyſick and Alchymy. I will not adviſe any body to diſtill it in a retort; for this mixture, if it groweth warm from beneath, it fulminateth like Gunpowder; but if it be kindled from above, it doth not fulminate, but onely burneth away like a quick fire: metals may be melted and reduced thereby.

To make a ſpirit out of Salt of Tartar, Sulphur, and Salt-nitre.

IF you take one part of ſalt of Tartar, and one part and a half of Sulphur, with three parts of ſalt nitre, and grind them together, you will have a commpoſition, which fulminateth like *Aurum fulminans*, and the ſame alſo (after the ſame manner as above hath been taught with gold) may be diſtilled into flores and ſpirits, which are not without ſpecial Vertue and Operation. For the corruption of one thing is the generation of another.

How to make a ſpirit of ſaw-duſt, ſulphur and ſalt nitre.

IF you make a mixture of one part of Saw-duſt made of Tilia or Linden-wood, and two parts of good ſulphur, and nine parts of purified and well dryed ſalt nitre, and caſt it in by little and little, there will come over an acid ſpirit, which may be uſed outwardly, for to cleanſe wounds that are unclean. But if you mix with this compoſition minerals or metals made into fine powder, and then caſt it in and diſtill it, there will come not only a powerful metallical ſpirit, but alſo a good quantity of flores, according to the nature of the mineral, which are of no ſmall vertue: for the minerals and metals are by this quick fire deſtroyed and reduced to a better condition, whereof many things might be written: but it is not good to reveal all things. Conſider this ſentence of the Philoſopers. *It is impoſſible to deſtroy without a flame, The combuſtible Sulphur of the Calx, which the digged Mine doth doe.*

Alſo fuſible minerals and metals may not only be melted, therewith, but alſo cupellated in a moment upon a Table in the hand or in a nut-ſhell; whereby ſingular proofs of oares and metals may be made, and much better, than upon a Cupel, whereof further in the fourth part of this book. Here is opened unto us a gate to high things; if entrance be granted unto us, we ſhall need no more books to look for the Art in them.

To make metallical ſpirits and flores by the help of ſalt-nitre and linnen cloth.

IF metals be diſſolved in their appropriated Menſtruums, and in the ſolution (wherein a due proportion of ſalt nitre muſt be diſſolved) fine linnen rags be dipt and dryed, you have a prepared metal, which may be kindled, and (as it was mentioned above concerning the ſaw-duſt) through the burning away and conſuming of their ſuperfluous ſulphur, the mercurial ſubſtance of the metal is manifeſted. And after the diſtillation is ended, you will find a ſingular purified calx, which by rubbing coloureth other metals, as that of gold doth guild ſilver, that of ſilver ſilvereth over copper, and copper calx maketh iron look like copper, *&c.* which colouring though it cannot bring any great profit, yet at leaſt for to ſhew the poſſibility, I thought it not amiſs to deſcribe it; and perchance ſomething more may be hid in it, which is not given to every one to know.

Of Gun-powder.

OF this miſchievous compoſition and diabolical abuſe of Gunpowder much might be written: but becauſe this preſent world taketh only delight in ſhedding innocent blood, and cannot endure that unrighteous things ſhould be reproved, & good things praiſed, therefore it is beſt to be ſilent, and to let every one anſwer for himſelf, when the time cometh that we ſhall give an account of our ſtewardſhip, which perhaps is not far off; and then there will be made a ſeparation of good and bad, by him that tryeth the heart, even as gold is refind in the fire from its droſs. And then it will be ſeen what Chriſtians we have been. We do all bear the name, but do not approve our ſelves to be ſuch by our works; every one thinketh himſelf better than others, and for a words ſake which one underſtandeth otherwiſe, or takes in another ſenſe than the other (and though it be no point, whereon ſalvation doth depend) one curſeth and condemneth another and perſecuteth one another unto death, which Chriſt never taught us to do, but rather did earneſtly command us that we ſhould love one another, reward evil with good, and not good with evil, as now a dayes every where they uſe to do; every one ſtandeth upon his reputation, but the honor of God and his command are in no repute, but are trampled under foot, and Lucifers pride, vain ambition, and Phariſaical hypocriſie or ſhew of holineſs, hath ſo far got the upper-hand with the learned, that none will leave his contumacy or ſtubbornneſs, or recede a little from his opinion, although the whole world ſhould be turned upſide down thereby. Are not theſe fine Chriſtians? By their fruit you ſhall know them, and not by their words. Woolves are now clothed with ſheeps skins, ſo that none of them almoſt are to be found, and yet the deeds and works of Woolves are every where extant.

All good manners are turned into bad, women turn men, and men women in their faſhion and behaviour, contrary to the inſtitutition and ordinance of God and Nature. In brief, the world goeth on crutches. If *Heraclitus* and *Democritus* ſhould now behold this preſent world, they would find exceeding great cauſe for their lamenting and laughing at it. And therefore it is no marvel, that God ſent ſuch a terrible ſcourge as gun-powder is upon us; and it is credible, that if this do not cauſe our amendment, that a worſe will follow, *viz.* thunder and lightning falling down from Heaven, whereby the world ſhall be turned upſide down for to make an end of all pride, ſelf-love, ambition, deceit and vanity. For which the whole Creation doth wait, fervently deſiring to be delivered from the bondage thereof.

Now this preparation, which is the moſt hurtful poyſon, a terror unto all the living, is nothing elſe but a *fulmen terreſtre* denouncing unto us the wrath and coming of the Lord. For Chriſt to judge the

world is to come with thundering and lightning: and this earthly thunder perchance is given us for to put us in mind and fear of that which is to come, but this is not ſo much as thought on by men, who prepare it only for to plague and deſtroy mankind therewith in a moſt cruel and abominable manner, as every one knoweth.

For none can deny but that there is no nimbler poyſon, than this gunpowder. It is written of the Baſiliske, that he killeth man only by his look, which a man may avoid, and there are but few (if any at all) of them found: but this poyſon is now prepared and found every where.

How often doth it fall out, that a place wherein this powder is kept is ſtricken with thunder as with its like, in ſo much that all things above it are in a moment deſtroyed, and carryed up into the air? Alſo in ſieges, when an Ordnance is diſcharged, or Mines blown up, all whom it lays hold on, are ſuddenly killed, and moſt miſerably deſtroyed. What nimbler poyſon then could there be invented? I believe there is none, who will not acknowledge it to be ſuch.

And ſeeing that the ancient Philoſophers and Chymiſts were always of opinion, that the greater the poyſon is, the better medicine may be made of it, after it is freed from the poyſon, which with us their poſterity is proved true by many experiences; as we ſee by Antimony, Arſenick, Mercury, and the like minerals, which without preparation are meer poyſon, but by due preparation may be turned into the beſt and moſt effectual medicaments, which though not every one can comprehend or believe, yet Chymiſts know it to be true, and the doing of it is no new thing to them. And becauſe I treat in this ſecond part of medicinal ſpirits, and other good medicaments, and finding that this which can be made out of gunpowder, is none of the leaſt, I would not omit in ſome meaſure, and as far as lawfully may be done, to ſet down its preparation: which is thus performed.

How to make a ſpirit of Gunpowder.

YOur diſtilling veſſel being made warm, and a great receiver with ſweet water in it, being applyed to it without luting, put a diſh with gunpowder, containing about 12. or 15. grains a piece, one after another into it; in the ſame manner as above was taught to do with gold. For if you ſhould put in too much of it at once, it would cauſe too much wind and break the receiver.

As ſoon as you have conveighed it into the veſſel, ſhut the door, and the gunpowder will kindle, and give a blaſt that it maketh the receiver ſtir, and a white miſt or ſteam will come over into the receiver. As ſoon as the powder is burnt, you may caſt in more before the miſt is ſettled, becauſe elſe the diſtilling of it would coſt too much time, and ſo you may continue to do until you have ſpirit enough. Then let the fire go out, and the furnace grow cool, and then take off the receiver, pour the ſpirit with the water that was poured in before (the flores being firſt every where waſhed off with it) out of the receiver into a glaſs body, and rectifie it in a B. through a limbeck, and there will come over a muddy water, taſting and ſmelling of ſulphur: which you muſt keep. In the glaſs body you will find a white ſalt, which you are to keep likewiſe. Take out the *Caput Mortuum*, which remained in the diſtilling veſſel, and looks like gray ſalt, calcine it in a covered crucible, that it turn white, but not that it melt; and upon this burnt or calcined ſalt, pour your ſtinking water, which came over through the limbeck, and diſſolve the calcined white ſalt with it, and the feces which will not diſſolve caſt away. Filtre the ſolution, and pour it upon the white ſalt, which remained in the glaſs body, from which the ſulphureous ſpirit was abſtracted before, and put the glaſs body (with a limbeck luted upon it) into ſand, and abſtract the ſulphureous water from it, which will be yellowiſh, and ſmell more of ſulphur than it did before. This water if it be abſtracted from the ſalt ſeveral times, will turn white, almoſt like unto milk, and taſt no more of ſulphur, but be pleaſant and ſweet. It is very good for the diſeaſes of the lungs. Alſo it doth guild ſilver, being anointed therewith, although not firmly, and by digeſtion it may be ripened and reduced into a better medicine.

The ſalt which remained in the glaſs body, urge with a ſtrong fire, ſuch as will make the ſand, wherein the glaſs ſtandeth red hot, and there will ſublime a white ſalt into the limbeck, in taſte almoſt like unto ſalt Armoniack, but in the midſt of the glaſs body, you will find another, which is yellowiſh, of a mineral taſte and very hot upon the tongue.

The ſublimed ſalts, as well the white which did aſcend into the limbeck, as the yellow, which remained in the glaſs body are good to be uſed in the plague, malignant feavers and other diſeaſes, where ſweating is required; for they do mightily provoke ſweating, they comfort and do cleanſe the ſtomach, and cauſe ſometimes gentle ſtools.

But what further may be done in Phyſick with it, I do not know yet.

In Alchymy it is alſo of uſe, which doth not belong to this place. Upon the remaining ſalt which did not ſublime you may pour rain water, and diſſolve it there in the glaſs body, (if it be whole ſtill) elſe if it be broken, you may take out the ſalt dry, and diſſolve and filtre and coagulate it again, and there will be ſeparated a great deal of fæces. This purified ſalt, which will look yellowiſh, melt in a covered crucible, and it will turn quite blood red, and as hot as fire upon the tongue, which with freſh water you muſt diſſolve again, and then filtre and coagulate; by which operation it will be made pure and clear, and the ſolution is quite green before it be coagulated, and as fiery as the red ſalt was before its diſſolution.

This graſs green ſolution being coagulated again into a red fiery ſalt, may be melted again in a clean and ſtrong crucible, and it will be much more red and fiery.

N. B. And it is to be admired that in the melting of it many fire ſparks do fly from it, which do not kindle or take fire, as other ſparks of coals or wood uſe to do. This well purified red ſalt being laid in a cold and moiſt place, will diſſolve into a blood red oyl, which in digeſtion diſſolveth gold and leaveth the ſilver: this ſolution may be coagulated, and kept for uſe in Alchimy.

There may alſo a pretious Tincture be extracted out of it with alcolized ſpirit of wine, which Tincture guildeth ſilver, but not firmly.

And as for uſe in Phyſick, it ought to be kept as a great Treaſure. But if the red fiery ſalt be extracted with ſpirit of wine before gold be diſſolved

ed therewith, it will yield likewiſe a fair red Tincture, but not ſo effectual in Phyſick as that unto which gold is joyned. And this Tincture can alſo further be uſed in Alchymy, which belongeth not hither, becauſe we only ſpeak of medicaments.

Of the uſe of the Medicine or Tincture made of Gunpowder.

THis Tincture whether with or without gold, made out of the red ſalt, is one of the chiefeſt that I know to make, if you go but rightly to work, and prepare it well; for it purifieth and cleanſeth the blood mightily, and provoketh alſo powerfully ſweat and urine; ſo that it may ſafely and with great benefit be uſed in the Plague, Feavers, Epilepſy, Scurvy, in *Melancholia Hypochondriaca*, in the Gout, Stone, and the ſeveral kinds of them; as alſo in all obſtructions of the Spleen and Liver, and in all diſeaſes of the Lungs, and it is to be admire that of ſuch a hurtful thing ſuch a good medicine can be prepared. Therefore it would be much better to prepare good medicaments of it, to reſtore the poor diſeaſed to health therewith, than to deſtroy with it thoſe that are whole and ſound.

I know a Chymiſt, that ſpent much time and coſt to ſearch this poyſonous dragon, thinking to make the univerſal medicine or ſtone of the ancient Philoſophers out of it. Eſpecially becauſe he ſaw, that ſo many ſtrange changes of colours appeared, whereof mention is made by the Philoſophers when they diſcribe their medicine and the preparation thereof.

The Dragons blood, Virgins milk, Green and Red Lyon, Black blacker than Black, White whiter than White and the like, more needleſs here to relate, which eaſily may perſwade a credulous man as it hapned alſo unto him. But afterward he found, that this ſubject in which he put ſo much confidence, was leprous and not pure enough, and that it is impoſſible to make that tingent ſtone of it, for to exalt men and metals, and ſo was glad to be contented with a good particular medicine and to commit the reſt unto God.

And ſo much of that poyſonous dragon, gunpowder: but that there is another and more purer dragon, whereof the Philoſophers ſo often made mention, I do not deny; for nature is mighty rich, and could reveal to us many arcana by Gods permiſſion: But becauſe we look only for great honor and riches, and neglect the poor, there is good reaſon why ſuch things remain hidden from wicked and ungodly men.

To make ſpirits and flores of Nitre and Coals.

IF you diſtill Nitre (well purified from its ſuperfluous ſalt) mixed with good coals, the Egyptian Sun bird doth burn away, and out of it doth ſweat a ſingular water, uſeful for men and metals. Its burnt aſhes are like unto calcined Tartar, and for the purging of metals not to be deſpiſed.

To make flores and ſpirits of flints, cryſtals or ſand, by adding of coals and ſalt nitre to them.

TAke one part of flints or ſand, and three parts of Linden coals, with ſix parts of good ſalt nitre mixed well together, and caſt of it in, and the combuſtible ſulphur of the flints will be kindled by the piercing and vehement fire of the ſalt nitre, and maketh a ſeparation, carrying over with it part thereof, which it turneth into ſpirits and flores, which muſt be ſeparated by filtring. The ſpirit taſteth as if it had been made of ſalt of Tartar and flints, and is of the ſame nature and condition; and the remaining *Caput Mortuum* alſo yieldeth ſuch an oyl or liquor in all like unto that, and therefore its condition is not deſcribed here, but you may find it where I ſhall treat of the ſpirit made of ſalt of tartar by adding of flints.

To make a ſpirit and oyl out of Talck with ſalt nitre.

TAke one part of Talck made into fine powder, and three parts of Linden-coals, mixe them with five or ſix parts of good ſalt nitre, caſt in of that mixture one ſpoonful after another, and there will come over a ſpirit and a few flores, which muſt be ſeparated as hath been taught above concerning flints.

The ſpirit is not unlike unto the ſpirit of ſand: the *Caput Mortuum*, which looks greyiſh, muſt be well calcined in a crucible, ſo that it melt, and then pour it out, and it will yield a white tranſparent Maſs, like as flints and cryſtals do, which in a cold moiſt cellar will turn to a thick liquor, fatter in the handling than the oyl of ſand. It is ſomething ſharp like unto oyl of Tartar; it cleanſeth the Skin, Hair and Nails, and makes them white; the ſpirit may be uſed inwardly for to provoke ſweat and urine: externally uſed, it cleanſeth wounds, and healeth all manner of ſcabs in the body out of hand. What further may be done with it, I do not know yet: But how to bring Talck, pebles, and the like ſtony things to that paſs, that they may be diſſolved with ſpirit of wine and reduced into good medicaments ſhall be taught in the fourth part.

To make a ſpirit, flores, and oyl out of Tin,

IF you mix two parts of the filings of Tin, with one part of good ſalt nitre, and caſt it in, as you were taught to do with other things, then the ſulphur of Tin will kindle the ſalt nitre, and make a flame, as if it were done with common ſulphur, whereby a ſeparation is made, ſo that one part of the Tin cometh over in flores and ſpirit, and the reſt ſtayeth behind, which if it be taken out, ſome of it in a moiſt place will turn into a liquor or oyl, which externally may be uſed with good ſucceſs in all ulcers for to cleanſe them. It hath alſo the vereue, if it be pertinently applyed to graduate and exalt wonderfully all the colours of vegetables and animals, which would be uſeful for dyers. The ſpirit of it mightily provoketh ſweating: the flores being edulcorated and uſed in plaiſters, do dry and heal very ſpeedily.

To make a ſpirit, flores and a liquor out of Zinck.

IN like manner as hath been taught with Tin, you may alſo proceed with Zinck, and it will yield a good quantity of flores, and alſo a ſpirit and oyl, almoſt of the ſame vertues with thoſe made of Tin: and theſe flores corrected with ſalt nitre, are better than thoſe which are taught to be made by themſelves in the firſt part of the book.

To make a ſpirit, flores and oyl of Lapis Calaminaris.

MIx two parts of ſalt nitre with one part of *lapis calaminaris* and caſt it in, and it will yield a ſharp ſpirit very uſeful for ſeparating of metals, and there will come over alſo a few yellow flores. The reſt remaining behind is a dark green Maſs very fiery upon the tongue, like ſalt of Tartar, and if it be diſſolved with rain water, yieldeth a graſs green ſolution, which being not preſently coagulated into ſalt, the green ſeparateth it ſelf from the fixed ſalt nitre, and there falleth to the bottom a fine red powder, and if it be edulcorated and dryed, and given from one grain to ten or twelve it cauſeth gentle ſtools and eaſy vomits, better than prepared Antimony; for *lapis calaminaris* and Zinck are of the nature of Gold, as in the fourth part ſhall be proved: the white *lixivium* or lye, from which the green is precipitated, may be coagulated into white ſalt, like unto ſalt of Tartar; but if you coagulate the green ſolution, before the green be ſeparated from the ſalt nitre, then you will get a very fair green ſalt, high in colour and much more fiery than ſalt of Tartar, whereby ſpecial things may be done in Alchymy, which doth not belong hither. And if you deſire to make ſuch a green ſalt for to uſe it in Alchymy, you need not take ſo much pains, as firſt to diſtil a ſpirit out of the mixture, but take three or four parts of good ſalt nitre, and mix it with one part of *lapis calaminaris*, and let this mixture boyl together in a wind furnace, till the ſalt nitre be coloured green by the *lapis calaminaris*, then pour it out and ſeparate the green goldiſh ſalt from it, and make ſuch good uſe of it as you think fit.

But if you will extract a good Tincture and medicine, make it into powder, and extract it with ſpirit of wine, and it will yield a blood red Tincture, both in Phyſick and Alchymy of good uſe.

Further you are to take notice, that among all metals and minerals, which I know (except gold and ſilver) there is none found, out of which can be extracted a greenneſs which is of fire-proof, but only out of *lapis calaminaris*, which deſerves to be well conſidered and further thought upon.

To make a ſpirit of ſalt nitre, ſulphur and common ſalt.

TAke one part of ſalt, two parts of ſulphur, and four parts of ſalt nitre, grind all together, and caſt in one ſpoonful after another to diſtil, and it will yield a ſharp yellow ſpirit, which if it be put among common water, ſo that the water be not made too ſharp of it, it is a good bath, good for many diſeaſes; eſpecially it healeth all ſcabs very ſuddenly. The *Caput Mortuum* may alſo be diſſolved in water and uſed among bathes, and it is good likewiſe, but the ſpirit is penetrating, and doth opperate ſuddenly in ſhrinkings and other defects of the nerves; of ſuch kind of bathes there ſhall be ſpoken more in the third part. Alſo the remaining fixed yellow ſalt is good to be uſed in Alchymy; for it graduateth ſilver by cementing.

To make a ſpirit, flores and oyl out of ſalt nitre and Regulus Martis.

TAke one part of *Regulus Martis ſtellatus* (made of one part of Iron or Steel, and three parts of Antimony, whoſe preparation is deſcribed in the fourth part) and three parts of pure ſalt nitre, mix and grind all together, and caſt it in by little and little to diſtil, and there will come over a ſpirit together with a white ſublimate, which muſt be ſeparated with water, as hath been taught above with other flores, and both the ſpirit and the flores are good to provoke ſweat. The remaining *Caput Mortuum*, (as they uſually call it) is not dead, but full of life and vertue, whereby much good may be done both in Phyſick and Alchymy, as followeth. The remaining Maſs, which looks white, and is very ſharp and fiery (if the *Regulus* have been pure, if not, then it will look yellowiſh) may be edulcorated with freſh water, and it will yield a *lixivium* or lye in all things like unto calcined Tartar, but ſharper and purer, and may be uſed almoſt in all operations inſtead of ſalt of Tartar (but firſt the *Regulus Antimonii* muſt be precipitated from it by the help of water) and afterward it may be coagulated into ſalt and kept for its uſe; the edulcorated, as alſo that which was precipitated with water is a white and fine powder, uſeful in the plague, feavers, and other diſeaſes to provoke ſweating thereby, and may very ſafely be uſed, and although if it be given in a greater quantity than uſual, it cauſes ſome vomits alſo, yet for all that it doth no hurt. It is eaſily taken becauſe it hath no taſte. It is given to children from 3, 4, to 12. grains: to elder folks from ℈ ſs. to ʒ ſs. they work ſucceſsfully in all diſeaſes, where ſweating is needful. This *Antimonium Diaphoreticum*, may alſo be melted into glaſs, and ſo extracted and diſſolved with ſpirit of ſalt, and it may be prepared into ſeveral good medicaments: and if all that which may be done with it, ſhould be deſcribed at large, it would require too much time. The *lixivium*, if it be coagulated, hath wonderful vertues, ſo that if one ſhould deſcribe them, he would hardly be credited by any body, becauſe it is not made of coſtly things; and truly the life of man is too ſhort to find out by experience all that lies hid in it: and it would be but a laughing matter to a proud fool, if one ſhould reveal it: therefore it is better to keep counſel, than to ſow ſtrife. *Baſilius Valentinus* in his Triumphant Chariot of Antimony, where he writeth of the ſigned ſtar, hinted it ſufficiently, but very few take notice of it. *Paracelſus* alſo, here and there in his books under an unknown name, makes frequent mention of it; but its true preparation and uſe, by reaſon of the unthankful was never deſcribed by the Philoſophers, which for inſtruction of Good Honeſt Men we do here mention.

Before you edulcorate the *Regulus* (made by fulmination) you may extract of it a good medicinal Tincture with ſpirit of wine, and if you diſſolve it with ſpirit of ſalt, there will ſhoot a white foliated Talck in all things like unto the Mineral Talck: whereof a liquor may be made, which coloureth the skin very white, but if this calx of Antimony, before it be extracted with ſpirit of wine or diſſolved with ſpirit of ſalt be made into fine powder, and expoſed to the moiſt air, it will diſſolve into a fat liquor, which though it be ſomething ſharp, yet doth no hurt to the skin, if it be uſed with diſcretion, but rather cleanſeth it more then any other thing, and ſo it doth likewiſe to the hair and nailes; but as ſoon as the liquor hath been ap-

plyed

plyed for that purpoſe, it muſt be waſhed off again with water, leſt it do not onely take away the groſs and unclean skin, but alſo work upon the tender white skin and do hurt, and therefore I give warning, that you uſe it diſcreetly: for according to the old proverb, you may miſuſe even that which elſe is good in it ſelf. If you put ſome of it into warm water and bath your ſelf in it, the groſs skin will peal off all the body, ſo that you will almoſt ſeem to be another body. And this bath alſo is good for many diſeaſes: for it openeth the pores mightily, and cleanſeth all the blood in the body, by drawing many ill humors out of it, which maketh a man light and ſtrong, eſpecially if he be purged firſt, before he uſeth the bath. It is alſo good for Melancholy, ſcurvy and leproſie, eſpecially when the red Tincture drawn out of it with ſpirit of wine, be uſed beſides. It is alſo good to be uſed in a foot bath for thoſe that are troubled with corns and other excreſcencies upon their feet, or with nailes that cut the fleſh; for it ſofteneth them and makes them fit for cutting, and as tractable as wax. For there is nothing known under the Sun, which ſofteneth more a hard skin, hair, nailes and other excreſcencies, than this oyl. And this I did ſet down therefore, becauſe I know, that many are ſo tormented therewith, that they cannot well endure their ſhoes upon their feet. But if you coagulate this oyl into ſalt, and melt it in a crucible, and powre it out into a flat braſs baſon, that it flow at large and may be broken, then you have the beſt Cauſticum, to open the skin withal where is need. If you diſſolve crude Tartar with it and coagulate it again, you will get a ſalt which is uſed in many Chymical operations; and there may be extracted out of it a blood red Tincture with ſpirit of wine, which proveth very effectual againſt all obſtructions.

Alſo every combuſtible ſulphur may be eaſily diſſolved with it, and uſed among bathes, it acteth his part admirably. If any oyl of ſpices be boyled therewith, then the oyl will diſſolve in it, and they turn together to a balſome, which doth mingle it ſelf with water, and is good to be taken inwardly for ſome infirmities: but women with child muſt not meddle with it, becauſe it makes them miſcarry. But after their delivery, it is good to expel after burthen and other reliques. But if you boyl *Oleum ligni Rhodii* with this liquor and roſe water ſo long till the oyl do incorporate with the liquor and waters and then ſeparate the watery ſubſtance from it, you will get a ſope as white as ſnow, which may be uſed for to waſh the hands with it, and it doth ſmell very well. You may alſo waſh the head with it; for it ſtrengtheneth the brain and cleanſeth the head and hair. This ſope may be diſtilled, and it will yield a penetrating oyl, very good for the ſinews and nerves.

Now as this liquor of *Regulus Antimonii* ſoftneth the skin, nailes, hair, feathers, horns, and the like, and diſſolveth them more than any thing in the world: In the like manner alſo it hath power to diſſolve not only metals, but alſo the hardeſt ſtones, but not in that manner which is done by boyling, as was mentioned of ſulphur, but after another way, which is not proper for this place. It ſufficeth that I hinted it. The fiery fixed ſalt nitre may be diſſolved with ſpirit of ſalt or vinegar, and ſublimed into a *Terra foliata*. What further can be effected with it, doth not belong to this place, and perchance ſome where elſe more ſhall be ſpoken of it.

To diſtil a Butyrum out of Antimony, Salt and vitriol, like unto that, which is made out of Antimony and Mercury ſublimate.

TAke one part of crude Antimony, two parts of common ſalt, and four parts of vitriol calcined white, beat all to powder and mix them well, and ſo caſt it in as you were taught to do with other materials, and there will come over a thick oyl of Antimony like butter, which may be rectified like any other oyl, that is made after the common way with Mercury ſublimate, and is alſo the ſame with it in uſe, which uſe you may ſee in the firſt part: the ſame alſo may be made better and in a greater quantity in the furnace deſcribed in the firſt part, and alſo with leſs coals and time by the help of the open fire, becauſe it endureth greater heat than in the ſecond furnace.

To diſtil Butyrum of Arſenick and Orpiment.

AFter the ſame manner as was taught with Antimony, there may alſo out of Arſenick and Auripigment together with ſalt and vitriol a thick oyl be diſtilled, which not only outwardly but alſo inwardly is ſafe to be uſed, and may be ſo corrected, that it ſhall be nothing at all inferior in vertue unto the *butyrum Antimonii*, but rather go beyond it: which perchance will ſeem impoſſible to many. But he that knows the nature and condition of minerals, will not be aſtoniſhed at my words, but they will be to him as a light in a dark place.

To make a rare ſpirit of vitriol.

IF common vitriol be diſſolved in water, and you boyle granulated Zinck in it, all the metal and ſulphur contained in the vitriol will precipitate on the Zinck, and the ſolution will turn white, the precipitated matter is nothing elſe, but iron, copper, and ſulphur, which the ſalt of vitriol did contain, and now is drawn from it by the Zinck. The reaſon why the metal precipitateth out of the ſalt upon the Zinck, belongeth to the fourth part, where you will find it ſufficiently explained; The white ſolution, from which the metallical matter is ſeparated, muſt be coagulated to the dryneſs of ſalt, and ſo by it ſelf a ſpirit diſtilled of it, which riſeth eaſily, and is in taſte and vertue not unlike unto common oyl of vitriol, but only that this is a little purer than the common.

Here perchance many may object: you take the green from the vitriol, which *Paracelſus* doth not teach, but bids us to keep it. To which I anſwer, that I do not teach here to make the ſweet red oyl of vitriol, whereof *Paracelſus* hath written, but the white acid oyl; which is as good, or rather much better than the common, which is made of the common impure vitriol. To what purpoſe is it, that you take green vitriol to diſtil, whereas the green doth not come over, and although that green ſhould come over, why ſhould that oyl be better than the white? for the green in the common vitriol is nothing elſe but copper and iron, which the ſalt water running through the paſſages of Metals did diſſolve and take into it ſelf, and as ſoon as ſuch a green vitriol feeleth the fire, the green turneth into red, which is nothing elſe but

a calcined iron or copper, which in the reducing by a ſtrong fire and by melting is made manifeſt.

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Paracelſus hath not taught us, that we ſhould drive over the green by the force of the fire into a red and ſweet oyl, but he hath ſhewed us an other way, which is found out by few men, whereof in the beginning of the ſecond part already hath been made mention.

This ſpirit or acid oyl diſtilled out of the purified vitriol, is of a pleaſant ſowreneſs, and ſerveth for all thoſe uſes, which above by the vitriol were deſcribed. And this proceſs is ſet down onely for that end, that we may ſee, that when the vitriol is purifyed, that then it is eaſier diſtilled, and yieldeth a more pleaſant ſpirit, than if it be yet crude and impure.

And that ſuch a purifying of the vitriol is nothing elſe but a precipitating of the metal, which the water (as before ſaid) running through the veins thereof hath aſſumed, is thus to be proved; diſſolve any metal in its appropriate Menſtruum, whether it be done with diſtilled acid ſpirits or ſharp ſalts, adding common water to them, or elſe dry by the fire in a crucible, according as you pleaſe, and then put into that ſolution another metal, ſuch as the diſſolvent doth ſooner ſeize on, then upon that which it hath aſſumed, and then you will find, that the diſſolvent doth let fall the aſſumed metal or mineral, and falls upon the other, which it doth ſooner ſeize on, and diſſolveth it as being more friendly to it; of which precipitation in the fourth Part ſhall be ſpoken more at large.

This one thing more is worthy your obſervation, that among all metals there is none more ſoluble than Zinck, and therefore that all the other (as well in the dry as in the wet way) may be precipitated thereby and reduced into light calxes, in ſo much that the calx of gold or ſilver precipitated in this manner (if ſo be you proceed well) retaineth its ſplendor or gloſs, and is like a fine powder wherewith you may write out of a pen.

To make a ſubtle ſpirit and pleaſant oyl of Zinck.

BEcauſe I made mention here of Zinck, I thought good not to omit, that there may be made a penetrating ſpirit and wholeſome oyl out of it by the help of vinegar, which is thus to be done. Take of the flores (which were taught to be made in the firſt part) one part, put them into a glaſs (fit for digeſtion) and pour upon them 8, or 10. parts of good ſharp vinegar made of honey; or in want thereof take wine vinegar, and ſet the glaſs with the flores and vinegar in a warm place to diſſolve, and the ſolution being performed, pour off the clear, which will look yellow and after you have filtred it abſtract the phlegm, and there will remain a red liquor or balſome, to which you muſt add pure ſand, well calcined, and diſtill it, and firſt there will come over an unſavory phlegme, afterward a ſubtle ſpirit, and at laſt a a yellow and red oyl which are to be kept by themſelves ſeparated from the ſpirit, as a treaſure for to heal all wounds very ſpeedily. The ſpirit is not inferior unto the oyl, not only for inward uſe to provoke ſweat thereby, but alſo externally for the quenching of all inflamations, and doubtleſs this ſpirit and oyl is good for more diſeaſes, but becauſe its further uſe is not known to me yet, I will not write of it, but leave the further tryal to others.

To diſtill a ſpirit and oyl out of Lead.

IN the ſame manner as was taught of Zinck, there may be out of lead alſo diſtilled a ſubtle ſpirit and a ſweet oyl, and it is done thus: Pour ſtrong vinegar upon *Minium*, or any other calx of lead, which is made *per ſe*, and not with ſulphur, let it digeſt and diſſolve in ſand or warm aſhes, ſo long till the vinegar be coloured yellow by the lead, and turned quite ſweet. Then pour off the clear ſolution, and pour on other vinegar, and let this likewiſe diſſolve, and this repeat ſo often, till the vinegar will diſſolve no more, nor grow ſweet; then take all theſe ſolutions, and evaporate all the moiſture, and there will remain a thick ſweet yellow liquor, like unto honey, if the vinegar was not diſtilled, but if it was diſtilled and made clear, then no liquor remaineth, but only a white ſweet ſalt. This liquor or ſalt may be diſtilled after the ſame manner as was taught with the Zinck, and there will come over not only a penetrating ſubtle ſpirit, but alſo a yellow oyl, which will not be much, but very effectual, in all the ſame uſes, as of the ſpirit, and oyl of the Zinck was taught.

N. B. This is to be obſerved, that for to make this ſpirit and oyl, you need no diſtilled ſpirit, but that it may be done as well with undiſtilled vinegar, and the undiſtilled yields more ſpirit than the diſtilled. But if you look for a white and clear ſalt, then the vineger muſt be diſtilled, elſe it doth not ſhoot into cryſtals, but remaineth a yellow liquor like unto honey, and it is alſo needleſs to make the ſolution in glaſſes, and by digeſtion continued for a long time, but it may as well be done in a glazed pot, *viz.* pouring the vinegar upon the Mineum in the pot, and boyling it on a coal fire; for you need not fear that any thing of the vinegar will evaporate, in regard that the lead keeps all the ſpirits, and lets only go an unſavory phlegm. You muſt alſo continually ſtir the lead about with a wooden ſpatulla, elſe it would turn to a hard ſtone, and would not diſſolve: the ſame muſt be done alſo when the ſolution is done in glaſſes; and the ſolution after this way may be done in three or four hours: and when both kind of ſolutions are done, there will be no difference betwixt them, and I think it providently done not to ſpend a whole day about that which may be done in an hour.

And if you will have this ſpirit and oyl better and more effectual, you may mix ℥ i. of crude Tartar made into powder with ℔ j. of diſſolved and purified lead, and ſo diſtil it after the ſame manner as you do diſtil it by it ſelf, and you will get a much ſubtler ſpirit and a better oyl than if it were made alone by it ſelf.

To diſtil a ſubtile ſpirit and oyl out of crude Tartar.

MAny think it to be but a ſmall matter to make the ſpirit of Tartar; for they ſuppoſe, that if they do but only put Tartar into a retort, and apply a receiver, and by a ſtrong fire force over a water, they have obtained their deſire: and they do not obſerve, that in ſtead of a pleaſant ſubtle ſpirit, they get but a ſtinking vinegar or phlegm; the pleaſant ſpirit being gone. Which ſome careful operators perceiving, they cauſed great receivers to be made, ſuppoſing by that means to get the ſpirit.

Now

Now when they after the diſtillation was done, weighed their ſpirits together with the remainder, they found, that they had ſuffered great loſs, wherefore they ſuppoſed it to be an impoſſible thing, to get all the ſpirits, and to loſe none, and indeed it is hardly poſſible to be done otherwiſe by a retort: for although you apply a great receiver to a ſmall retort, and that there be alſo but a little Tartar in it, and the joynts being well luted, ſo that nothing can paſs through, and though you make alſo the fire never ſo gentle, hoping to get the ſpirit by that way, yet for all that you cannot avoid danger and loſs. For at laſt the retort beginning to be red hot, and the black oyl going, then and but then the ſubtleſt ſpirits will come forth, which either ſteal through the joynts, or elſe do break the retort or receiver, becauſe they come in abundance and with great force, and do not ſettle eaſily: wherefore I will ſet down my way of making this moſt profitable, and excellent ſpirit.

The preparation and uſe of the ſpirit of Tartar.

TAke good and pure crude Tartar, whether it be red or white, it matters not, make it into fine powder, and when the diſtilling veſſel is red hot, then caſt in with a ladle half an ounce and no more at once, and ſo ſoon as the ſpirits are gone forth and ſetled, caſt in another ℥ ſs. and this continue, till you have ſpirit enough, then take out the remainder, which will look black, and calcine it well in a crucible, and put it in a glaſs retort, and pour the ſpirit that came over together with the black oyl, upon it, drive it in ſand at firſt gently, and the ſubtleſt ſpirits will come over, and after them phlegme, at laſt a ſowre vinegar together with the oyl, whereof you muſt get each by it ſelf. But if you deſire to have the ſubtle ſpirit which came over firſt, more penetrating yet, then you muſt take the *Caput Mortuum* that ſtaid in the retort, and make it red hot in a crucible, and abſtract the ſpirit once more from it, and the calcined Tartar will keep the remaining moiſtneſs or phlegm, and only the ſubtleſt ſpirit will come over, which is of a moſt penetrating quality, whereof from half a dram to an ounce taken in wine or any other liquor provoketh a quick and ſtrong ſweat, and it is a powerful medicine in all obſtructions, and moſt approved and often tryed in the plague, malignant feavers, ſcurvy, *Melancolia Hypochondriaca*, collick, contracture, epilepſy and the like diſeaſes. And not only theſe mentioned diſeaſes, but alſo many others more, which proceed from corrupt blood under God may ſucceſsfully be cured with it.

The phlegm is to be caſt away, as unprofitable: the vinegar cleanſeth wounds: the oyl allayeth ſwelling and pains, and doth cure ſcabs, and diſperſeth knobs that are riſen upon the skin, as alſo other excreſcencies of the ſame, if it be uſed timely, and the uſe thereof be continued.

N. B. If the black ſtinking oyl be rectified from the calcined *Caput Mortuum*, it will be clear and ſubtle, and it will not only aſſwage very ſpeedily all pains of the gout, but alſo diſſolve and expel the conglobated gravel in the reines, applyed as a plaiſter or unguent. In like manner it will diſſolve and extract the coagulated Tartar in the hands, knees and feet, ſo that the place affected will be freed and made whole thereby: becauſe in ſuch a deſpicable oyl there lyes hid a volatile ſalt which is of great vertue. But if you deſire experimentally to know whether it be ſo, then pour upon this black ſtinking oyl an acid ſpirit, as the ſpirit of common ſalt, or of vitriol or ſalt nitre, or only diſtilled vinegar, and the oyl will grow warm and make a noyſe and riſe, as if *Aqua fortis* had been powred upon ſalt of Tartar, and the acid ſpirit will be mortified thereby, and turn to ſalt. And this well purified oyl doth diſſolve and extract the Tartar out of the joynts (unleſs it be grown to a hard ſtony ſubſtance) even as ſope ſcowres the uncleanneſs out of cloths, or to compare it better, even as like receiveth its like, and is eaſily mixed with it, and doth love it; but on the contrary, nothing will mix it ſelf with that wherewith it hath no affinity at all. As if you would take pitch out of cloth by waſhing it with water, which never will be done by reaſon of the contrary nature; for common water hath no affinity with pitch or other fat things, nor will it ever be taken out therewith without a mediator, partaking of both natures, *viz.* of the nature of pitch and that of the water, and ſuch are ſulphureous ſalts, and nitrous ſalts, whether they be fixed or volatile. As you may ſee at the ſoap boylers, who incorporate common water by the help of ſulphureous ſalts with fat things, as tallow and oyl. But if you take warm oyl or any thin fat ſubſtance, and put it upon the pitch or rozin, then the oyl eaſily accepteth of and lays hold on its like, and ſo the pitch is diſſolved and got out of the cloth, and the remaining fatneſs of the oyl may be fetcht out of the cloth with lye or ſope and common water, and ſo the cloth recovereth its former beauty and pureneſs. And as it falleth out with ſulphureous things, ſo it doth likewiſe with Mercurial. For example, if you would take the ſalt out of powdered fleſh or pickled fiſh with a lixivium it would not ſucceed, becauſe that the nitrous and acid ſalts are of contrary natures.

But if upon the powdered fleſh or pickled fiſh you pour on water wherein ſome of the ſame ſalt (wherewithall the fleſh was powdered) is diſſolved, that ſalt water will extract the ſalt out of the fleſh, as being its like, much more than common ſweet water, wherein there is no ſalt.

In this manner the hardeſt things alſo, as ſtones and metals, may be joyned or united with water, whereof more in my other books are extant; it is needleſs here therefore to relate. I gave a hint of it, only for to ſhew, that always like with like muſt be extracted. True it is that one Contrary can mortifie another, and take the corroſiveneſs from it, whereby the pains for a time are aſſwaged, but whether the cauſe of the diſeaſe it ſelf be eradicated thereby, is a queſtion.

Here may be objected, that I make a difference between the ſulphureous and Mercurial ſalts, whereas neither Mercury nor ſulphur apparently is to be ſeen in either. It is true, he that doth not underſtand nor know the nature of ſalts, is not able to apprehend it. And I have not time now to demonſtrate it, but the ſame is ſhewed at large in my book *de Natura ſalium*, that ſome of them are ſulphureous, and ſome Mercurial: but he that looks for a further direction yet, let him read my book *de Sympathia & Antipathia rerum*, wherein he ſhall find it demonſtrated that from the Creation of the World to the time preſent, there were always two contrary natures fighting one againſt the other,

which fight will continue ſo long till the Mediator betwixt God and Man, the Lord Jeſus Chriſt ſhall put an end unto this ſtrife, when he ſhall come to ſeparate the good from the bad, by whoſe lightning and fire flame the proud and hurtful ſuperfluous ſulphur ſhall be kindled and conſumed: the pure Mercurial being left in the center.

How to make pretious ſpirits and oyls out of Tartar joined with minerals and metals.

TAke any metal or mineral, diſſolve it in a fit menſtruum, mix it with a due proportion of crude Tartar, ſo that the crude Tartar being made into powder together with the ſolution make up a pap a it were; then at once caſt in one ſpoonful of it, and diſtil it into a ſpirit and oyl, which after the diſtillation muſt be ſeparated by rectification, for to keep each by its ſelf for its proper uſe.

The uſe of the metallized ſpirit and oyl of Tartar

THis Tartarized ſpirit of metals is of ſuch a condition, that it readily performeth its operation according to the ſtrength of the ſpirit, and the nature of the metal or mineral, whereof it is made. For the ſpirit and oyl of Gold and Tartar is good for to corroborate the heart, and to keep out its enemies: the ſpirit of ſilver and tartar doth ſerve for the brain; that of Mercury and Tartar, for the liver: of lead and tin for the ſpleen and lungs: of iron and copper for the reins and ſeminary veſſels: that of Antimony and Tartar for all accidents and infirmities of the whole body; and theſe metallical ſpirits made with Tartar, provoke ſweat exceedingly, whereby many malignities are expelled out of the body. Likewiſe alſo the oyl hath its operation, though this of ſeveral metals, as of Mercury and Copper, is not well to be uſed inwardly, becauſe it cauſeth ſalivations and ſtrong vomits. But externally they are very good for to cleanſe all putrid ulcers, and to lay a good and firm ground for healing them.

The remainder, whereof the ſpirit and oyl is diſtilled, you may take out, and reduce it in a crucible into a metal, ſo that what is not come over, may not be loſt, but made to ſerve again.

And as you were taught to diſtil ſpirits and oyls out of diſſolved metals and crude Tartar; ſo you may get them likewiſe out of common vitriol and Tartar, *viz.* thus, take one part of Tartar made into powder, two parts of good pure vitriol, mix them well together, and diſtil a ſpirit of them, which though it be unpleaſant to take, for all that in all obſtructions and corruption of blood whatſoever it is not to be deſpiſed, but very ſucceſsfully performeth its operation; eſpecially when it is rectified from its *Caput Mortuum*, and ſo freed from its phlegm; and its beſt vertue, which conſiſteth in the volatility, be not loſt in the diſtilling.

N. B. But if you will have this ſpirit more effectual, then you may join Tartar and vitriol by boyling them together in common water, and cryſtallizing; and then caſt it in, and diſtil it, and there will come over a much purer and more penetrating ſpirit; becauſe that in the ſolution and coagulation of both, many fæces were ſeparated: but if to one part of vitriol you take two parts of Tartar, and diſſolve it together, and ſo filter and coagulate it, then the Tartar with the vitriol will ſhoot no more, but there remaineth a thick liquor like unto honey, out of which with ſpirit of wine there may be extracted a good tincture againſt obſtructions. This liquor taken from ℈ i. to ʒi. doth purge very gently, and ſometimes it cauſeth a vomit, eſpecially if the vitriol was not pure and good: and it may be alſo diſtilled into a ſpirit not inferiour unto the former in vertue. Beſides the way above taught, there is yet (for to diſtil a metallized ſpirit of Tartar) another way, whereby ſeveral metals and minerals may be reduced into pleaſant ſpirits and oyls, and of more vertue, and it is done in this manner.

Take of the Tartar of white Rheniſh wine made into powder, pour upon it ſweet rain or running water, ſo that to ℔ j. of tartar there be ℔ x. or ℔ xij. of water, or ſo much that the tartar may be diſſolved by it in the boyling, and then boyl the mixture with the water in a tinned kettle, or which is better, in a glazed pot, until it be quite diſſolved, and in the mean while take off the skum (with a wooden skimmer) ſtill as it riſeth in the boyling: and when no more skum riſeth, and all the tartar is diſſolved, then pour the ſolution thus hot through a linnen cloth, tyed ſtraight on an earthen glazed veſſel, that the remaining ſlimineſs may be ſeparated. The tartar water being ſtrained, let it ſtand for 24. or 30. hours without ſtiring, and there will ſtick a cryſtallized tartar to the ſides of the veſſel, which after the water is poured off may be taken out, and waſhed with cold water, and then dryed. This purified tartar keep, until I ſhall teach you, what further is to be done with it; and this tartar is pure enough for the above ſaid purpoſe, *viz.* to reduce metals into oyl with it, as ſhall follow anon. It is alſo good taken of it ſelf for an abſterſive to make the body ſoluble. But if you deſire to have it yet whiter and fairer and in great Cryſtals, you muſt proceed thus.

You muſt know this that all ſalts, if they ſhall ſhoot into great cryſtals, there muſt be a great quantity of them, for of little there comes but little. And if you will make great and fair white cryſtals of tartar, which will be no better than the former, but only pleaſant to the eye, then you muſt proceed in this manner.

Take of white tartar made into powder about ten or thirty ℔. pour ſo much water upon it, as is needful for to diſſolve it, and boyl it by a ſtrong fire in a tinned kettle, until all the tartar be diſſolved, which you may know by ſtirring in it with a wooden ladle, and skim off diligently all the filth riſing on the water; and you muſt take heed, that you take neither too much nor too little water to it; for if you take too little, part of the tartar will remain undiſſolved, and ſo will be caſt away and loſt among the ſlime: but if you take too much of it, then the tartar is too much diſſperſed in the water, and cannot ſhoot well, and ſo will likewiſe be loſt, being caſt away afterwards with the water. For I have heard many a one complain, that they could get but little of a pound, and therefore ſuppoſed the tartar to have been naught, whereas the fault was not in the tartar, but in the workman, that managed not well his work, pouring away one half which did not ſhoot with the water: but if you proceed well, then four pound of common tartar will yield ℔ iij. of pure white cryſtals. The ſolution being well made, and no skim more

riſing

riſing at the top, cover the kettle, and let it cool without removing from the warm place it ſtands in, which will be done within three or four dayes, if the kettle be bigg. But the fire muſt be taken away from under the kettle, and ſo let it ſtand for the time mentioned. In the mean while the Tartar will cryſtalliſe to the ſides of the kettle, which cryſtals after the time is expired, and the water poured off, are to be taken out and waſhed and boyled again with freſh water, and ſo skimmed and cryſtalliſed; and this proceeding muſt be ſtill reiterated, untill (which is done the third or fourth time) the cryſtals are white enough: then take them out, dry and keep them for uſe; whereof from ℥ j. to ℥ j. made into powder, and taken in wine, beer, warm broth or other liquor, will give ſome gentle ſtooles, and ſerveth for thoſe, which cannot endure ſtrong phyſick. This tartar may be ſharpned with Diagridium or any other purging drug, that ſo you need not take it in ſo great a quantity at once, but a leſſer doſe may ſerve turn. But if you do not look for great cryſtals, but only for Tartar well purified, then you may uſe this following manual, and you will get exceeding fair and gliſtering little cryſtals, which need no beating into powder, but by the working come to be ſo pure and fine, as if they had been ground upon a ſtone, and looking not like a dead powder, but having a gloſs, like unto ſmall gliſtering ſnow that fell in very cold weather, and it is done thus: when the cryſtals are come to be pure enough by often diſſolving and coagulating, then diſſolve them once again in pure water, and pour the ſolution into a clean veſſel of wood, copper, or earth being glaſed; and let it not ſtand ſtill (as above taught with the cryſtals) but as ſoon as it is powred in, with a clean wooden ſtick ſtirr about continually without ceaſing, till all be cold, which will be done in half an houre. In this ſtirring the Tartar hath no time to ſhoot into cryſtals, but doth coagulate into the ſmalleſt gliſtering powder, pleaſant to behold, and like unto frozen ſnow ſettleth at the bottom of the veſſel; then pour off the water, and dry the powder, and keep it for uſe. The waters which you poured off, in regard that they contain yet ſome Tartar, ought not to be caſt away (as others do) but evaporated, and the Tartar contained in them will be ſaved, and ſo nothing will be loſt, and in this manner not only white Tartar may be reduced into clear cryſtals, but alſo the red being ſeveral times diſſolved and cryſtallized, loſeth its redneſs, and turneth white and clear. Beſides the aboveſaid, there is another way to reduce the Tartar into great white cryſtals at once by precipitation; but theſe being good enough for our purpoſe, *viz.* to make good medicines out of metals, I hold it needleſs to looſe more time by the relation of it, and ſo I will acquieſce.

Another way to make a metalliſed ſpirit of Taratr.

TAke of purified Tartar diſſolved and coagulated but once, as much as you pleaſe, pour ſo much rain or other ſweet water to it as will ſerve to diſſolve it; in which ſolution you muſt boyl plates of metals, until the Tartar have diſſolved enough of it, ſo that it will diſſolve no more; the ſign whereof is, when the ſolution is deep coloured of the metal, and during your boyling you muſt often ſupply the evaporated water with pouring on of other, leſt the Tartar come to be too dry and burn; and this ſolution may be done beſt of all in a metallical veſſel; as when you will make the ſolution of iron, you may do it in an iron pot; and for copper you may take a copper kettle, and ſo forth for other metals, a veſſel made of the ſame is to be taken. But you muſt know that gold, ſilver, and crude Mercury, unleſs they be firſt prepared cannot be diſſolved like iron and copper, but when they are prepared firſt for the purpoſe, then they will alſo be diſſolved. In like manner ſome minerals alſo muſt be firſt prepared, before they can be diſſolved with Tartar and water. But if you can have good glaſſes or glazed veſſels of earth, you may uſe them for all metals and minerals for to diſſolve them therein, and the ſolution you may not only uſe of it ſelf for a medicine, but alſo diſtill it, and make a very effectual ſpirit and oyl of it as followeth.

To diſtill the ſpirit and oyl of Lead and Tin.

TAke the filings of Lead and Tin, and boyl them with the water or ſolution of Tartar in a leaden or tin veſſel, untill the Tartar be ſweetned by the water, ſo that it will diſſolve no more, to which paſs it will be brought within twenty four hours, for both theſe metals will be diſſolved but ſlowly, but if you would perform this ſolution ſooner, then you muſt reduce the metals firſt into a ſoluble calx, and then they may be diſſolved in leſs time than an hour. The ſolution being done, you muſt filtre it, and in B. abſtract all the moiſture to the thickneſs or conſiſtency of honey, and there will remain a pleaſant ſweet liquor, which of it ſelf with out any further preparation may ſafely be uſed inwardly for all ſuch diſeaſes, for which other medicaments, made of theſe metals are uſeful. Eſpecially the ſweet liquor of lead and tin doeth much good in the Plague, not only by driving the poyſon from the heart by ſweating, but alſo by breaking or allaying the intolerable heat, ſo that a happy cure doth follow upon it: but externally the liquor of lead may be uſed ſuccesfully in all inflammations, and it healeth very ſuddenly, not only freſh wounds, but alſo old ulcers turned to fiſtulaes; for the Tartar cleanſeth, and lead conſolidates.

The liquor of tin is better for inward uſe than for outward whoſe operation is not ſo fully known yet, as that of lead. But if you will diſtil a ſpirit thereof, then caſt it in with a ladle by little and little, as above in other diſtillations oftentimes was mentioned, and there will come over a ſubtle ſpirit of tartar, carrying along the vertue and beſt eſſence of the metal, and therefore doth alſo prove much more effectual than the common ſpirit of tartar, which is made alone by it ſelf, and this ſpirit as well that which is made of tin, as that of lead, if it be well dephlegmed firſt, may be uſed and held for a great treaſure in all obſtructions, eſpecially of the Spleen; and few other medicines will go beyond them; but beſides there muſt not be neglected the uſe of good purging medicines, if need require them. With the ſpirit there cometh over alſo an oyl, which is of a quick operation, eſpecially in wounds and ſores of the eye, where other oyntments and plaiſters may not ſo fitly be uſed, for it doth not only allay the heat and inflammation, a common ſymptome of the eye wounds, but alſo doth hinder and keep back all other ſymptomes which few other medicaments, are a-

ble to do; and for the reſidue, if it be driven further by the ſtrongeſt fire, then there will come over a ſublimate, which in the air diſſolveth into oyl, which is alſo of a powerful operation, not only in phyſick, but alſo in Alchymy.

And the Lead runeth together into a fair white *Regulus*, which is much whiter, purer and fairer than other common lead: but the tartar retaines the blackneſs, and raiſeth it ſelf to the top as a fuſible droſs, which is impregnated with the ſulphur of lead, wherewith you may colour hair, bones, feathers and the like, and make them to be, and remain brown and black.

I made tryal once of ſuch a diſtillation in an iron veſſel, whereby the ſame in the inſide was ſo whitened by the purified lead, that it was like unto fine ſilver in brightneſs: which afterwards trying again, it would not fall ſo fair as at firſt; whereat none ought to wonder, for I could write ſomething more (if it were fit) of tartar, knowing well what may be effected with it, if I did not ſtand in fear of ſcoffers, which vilify all what they do not underſtand. I durſt preſume to call tartar the Sope of the Philoſophers; for in the cleanſing of ſome metals, by long experience I found it of admirable vertue; though I would not be underſtood thus, as if I did count it to be the true *Azoth univerſalis Philoſophorum*, whereby they waſh their Laton: but I cannot deny, but that it is of particular uſe for the waſhing and cleanſing of ſeveral metals; for it is indued with admirable vertues for the uſe of metals, whereof in other places more ſhall be ſaid hereafter.

How to make a Tartariſed ſpirit and oyle out of Iron or Steel and Copper.

IF you intend to make a good medicine out of iron or ſteel or copper joyned with tartar, then for the iron or ſteel take an iron pot, and for copper a kettel of copper, make them very clean and put in it the filings of iron, or ſteel, or copper, which you pleaſe, and twice as much of pure tartar made into powder, and ſo much water, that the tartar may be diſſolved well by it in the boyling, and ſo boyl the metal with the tartar-water ſo long, till it be deeply coloured by the metal, as red by the iron, and deep green by the copper; and when the water in the boyling doth waſte, you muſt ſtill ſupply it with other, that the tartar may not burn; for there muſt be alwayes ſo much water, that no skin of the tartar may riſe at the top, but that it remain always open, and there muſt not be too much water neither, leſt it be too ſweet, and not able to diſſolve the metal. The ſolution of iron or ſteel being come to be red and ſweet, and in taſte like unto vitriol, but green and bitter of copper, pour it off warm by inclination into an other clean veſſel, and let it ſtand ſo long again in a very gentle heat of coals, till almoſt all the water be evaporated, and the diſſolved metal with the tartar remain in the conſiſtency of honey.

Which metallical liquor may be uſed inwardly and outwardly (eſpecially that of iron) which doth purge gently, and openeth the obſtructions of the Liver and Spleen: cleanſeth the Stomach, and killeth Worms: externally uſed it is a good wound balſome, and goes far beyond all ſuch as are made of vegetables. It is a ſingular treaſure, not only for to cure new wounds; but alſo for to cleanſe and heal old corrupt exulcerated ſores, turned to fiſtulaes; but the liquor of copper is not ſo ſafe for to be uſed inwardly, for it is not only very unpleaſant in taſte, but alſo cauſeth vehement vomits: and therefore I would not adviſe any one to be forward to uſe it, unleſs it be for ſtrong folks and for to kill worms in them, for which purpoſe it is excellent good and ſurpaſſeth all other medicines whatſoever; but to little children it ought not to be given at all, in regard that it is of far too ſtrong an operation for them.

N. B. And if you will uſe it to ſtrong bodies againſt the worms or ſtomach-agues, you muſt obſerve that the patient (in caſe that he cannot get it up) thruſt his finger into the throat to further the vomiting, that it may not ſtay behind, but come forth again out of the body, which done health followeth upon it; but if it remain in the body, it cauſeth a loathſomeneſs to uſe it any more. And therefore you muſt take heed to uſe it warily: and in regard that this liquor is very bitter, you may mix it with ſome ſugar, to facilitate the taking thereof; but that of iron needeth no ſuch correction, it being ſweet enough of it ſelf, and therefore I commend and prefer it before the other: but if you will needs have that of copper (becauſe it worketh ſo ſtrongly) then the Patient muſt keep in from the cold aire, and not preſently after the operation load the ſtomach with ſtrong drink and ſuperfluity of meat, contenting himſelf with ſome warm broth and a little cup of wine or beer, and the next day his meat and drink will taſte the better with him, and do him ſo much the more good.

But externally, this liquor is of the ſame uſe with that of iron or ſteel, yea, proveth more effectual and ſpeedier in healing. It would be good that Surgeons knew how to prepare it, and would uſe it inſtead of their ſalves, wherewith many freſh wounds are ſpoyled and turned into horrid ulcers, eſpecially it requiring ſo little coſt and pains to make it. And if you would have theſe liquors purer yet, you muſt pour on ſpirit of wine, and extract them, and they will eaſily yield their tincture, and leave many fæces behind which are good for nothing: but the tincture will be ſo much the better, purer, and more effectual, ſo that you need uſe but four or five drops for purging, whereas of the groſs liquor you muſt have from 4, 6, 8. to 12. or 16. drops: and this extracted tincture worketh alſo much better externally, and keepeth longer than the balſome or liquor, which in time is corrupted, but the extraction is never ſpoiled. But if you will diſtil the liquor or balſome, it is needleſs that it be extracted firſt, but may be diſtilled ſo as the boyling made it, after the ſame manner, as above was taught for Lead, and there will come over a yellow ſpirit and oyl from iron or ſteel, and from copper a greeniſh ſpirit and oyl.

The ſpirit and oyl of iron may ſafely be uſed in the plague, feavers, obſtructions, and corruption of blood, from ℥ i. to ʒ i. It is much better to provoke ſweat, than that which is made of crude Tartar, without addition of a metal: the like doth that alſo which is made of copper and more effectually yet, and ſometimes cauſeth a vomit, if it be uſed in a greater quantity, than is fitting.

N. B. Although the Chymiſts do prefer copper before iron, as a more firm and ripe metal, nevertheleſs it is found by experience, that iron or ſteel

ſteel by reaſon of its ſweetneſs is better to be uſed for an inward medicine than copper. But for external uſe, copper (if it be well prepared) hath the preheminence, being an appropriate medicine for all ulcers and open ſores, in all the parts of the body, if the ſame inwardly be kept clean by fitting purges. For not only the now deſcribed medicine, but alſo many more beſides, are taught to be made out of copper in other places of my books.

A Country-phyſick and purge I will teach for thoſe, which either live far from Apothecary-ſhops, or have no money to ſpare for phyſick; and it is to be made out of iron and copper, whereby they may cleanſe their ſlimy ſtomachs, ſpoyled by a diſorderly dyet, whence head-aches, worms, agues, and other diſeaſes are occaſioned, warning withal thoſe that are either too old or too young, or elſe decayed and weak, and ſo not ſtrong enough for ſuch powerful phyſick, that they will forbear to uſe it, leſt beſides the worms, they kill and expel life it ſelf alſo; but thoſe that are of a ſtrong conſtitution, and a middle age, and of a ſound heart, may ſafely uſe this purge, whereby ſtomach-agues, belly-worms, and may other occult diſeaſes may be cured with good ſucceſs. The preparation is done thus: Take ℥ ſs. of pure tartar made into powder, & ℥ ſs. or ℥ j. of ſugar or honey, and ℥ v. or ℥vj. of ſpring or rain water, put all into a clean copper veſſel which is not greaſy, and boyl it upon a coal fire as long or ſomewhat longer than you uſe to boyl an egg, or at the furtheſt half a quarter of an hour; take off the skum in boyling, let it ſtand till it be milk-warm, ſo that it may be drunk. This potion taſting almoſt like warm wine ſweetned with ſugar, give unto the patient to drink, and let him faſt upon it, and within half an hour it will begin to work upwards and downwards; whereat you need not be amazed, but only keep the body warm, and within an hour it will have done working. But if you will drive out worms from little children by purging, then inſtead of the copper-veſſel, take a clean iron-veſſel, and put in a leſs quantity of tartar, ſugar and water, and boyl it as aboveſaid, and give it to them, and it will purge only downward, but ſometimes it will alſo give a gentle vomit, which will do them no hurt, but rather will cleanſe the ſtomach the better. But if the drink be too weak, ſo that it doth not work, it may be uſed again the next day (but you muſt take more of the ingredients, or elſe let them boyl longer) there is no danger in it at all, if you proceed aright, and it is much pleaſanter to take, than the bitter worm-ſeed, wherewith they uſually torment children.

The reaſon why this decoction works in this manner is, that the tartar and ſugar being boyled in metallical veſſels with water, work upon the metal, and extract vertue out of it, which cauſeth vomiting and purging (the Tartar alſo being helpful to it.)

How to make a Tartariſed ſpirit of Mercury.

VUlgar Mercury cannot be diſſolved like the former metals with tartar and water, without any foregoing preparation; but muſt be ſublimed firſt with ſalt and vitriol, or cryſtalliſed with *Aqua fortis*, and then it may be diſſolved by boyling with tartar and water, and reduced into a balſame, like other metals, but is not to be uſed inwardly, unleſs it be digeſted a ſufficient time, ſo that its fierceneſs be allayed: Externally it may ſafely be uſed in all deſperate, eſpecially venereal ſores, and it is a very effectual and profitable medicine for them. But moſt of all it doth ſerve for Alchymy, although few do know this gueſt, becauſe he will not be ſeen by every one. The ſpirit which comes over from it by diſtillation, is an admirable thing not only in phyſick, but alſo in Alchymy: yet you muſt take heed, that inſtead of a friend, you do not harbor a great enemy: for its force and vertue is very great and powerful.

How to make a Tartariſed ſpirit of Gold and Silver.

GOld and ſilver alſo can by no means be diſſolved with tartar in a wet way: but in a dry way adding its helper to it, it will eaſily diſſolve, which doth not belong hither; but if you will draw a ſpirit of it, then the gold and ſilver muſt firſt by diſſolving and coagulating be reduced to cryſtals, and then diſſolved with purifyed tartar and water, and of Gold you will get a yellow ſolution, and of ſilver a white inclining unto green, which being reduced to the conſiſtency of honey, may be uſed ſafely and without fear. The ſolution of Gold doth looſen and keep the body open; it effectually ſtrengtheneth the ſtomach, heart, lungs, and liver, and other principal members: and that of ſilver purgeth very forcibly, according to the quantity given, like another purge, but without harm or danger, ſo that in all diſeaſes where purging is neceſſary, it may be uſed ſafely from ℈ i. to ℥ ſs. but that of gold is uſed in a ſmaller quantity: and both the liquor of gold and of ſilver may very ſucceſsfully be uſed externally: but becauſe for external uſes inferiour metals will ſerve the turn, it is needleſs to uſe coſtly things thereto.

The ſpirit which is forced from it by diſtillation, is endued with great vertue: for the volatile part of the metal cometh over-joyned with the ſpirit of tartar, the remainder may be reduced, ſo as it was taught of other metals. This ſpirit, eſpecially that of Gold, is exceeding good in the plague and other diſeaſes, where ſweating is neceſſary: for it driveth not only by ſweating, all Malignities from the Heart, but alſo doth ſtrengthen the ſame, and preſerveth it from all hurtful ſymptomes. Likewiſe alſo that of ſilver is very commendable, eſpecially if it be firſt dephlegmed from its *Caput Mortuum*, as above was taught in the preparation of the common ſpirit of tartar. For any Phyſitian expert in Chymiſtry may eaſily gueſs what the ſpirit of tartar well rectifyed and impregnated with the vertues of gold may effect, and therefore it is needleſs to make any further mention of it, but it ſhall be left to the tryal thereof.

To make a Tartariſed ſpirit of Antimony,

CRude Antimony cannot be diſſolved in ſuch a manner as above hath been taught: but if it be firſt prepared into flores, or a *vitrum*, it yieldeth eaſily its vertue in boyling, and it is done thus: Take to one patt of the flores or of ſmall ground *vitrum Antimonii* made *per ſe*, three parts of pure tartar, and 12. or 15. parts of clean water, boyl the Antimony with the tartar and wa-

ter in a glazed pot for three or four hours, and the evaporated water muſt be ſtill ſupplyed with other that the tartar may not burn for want of water, and the *vitrum* muſt be ſometimes ſtirred about with a wooden ſpatula (which the flores being light do not need): This done, the tartar water will be deep red coloured by the Antimony, and leave the remaining Antimony ſettled in the bottom, from which pour off the ſolution, and after having filtred it, evaporate the water from it, and then extract it once more with ſpirit of wine, and you will get a blood-red *Extractum*, whereof 1, 2, 3. to 10. or 12. drops given at once, cauſeth gentle vomits and ſtools, which may be ſafely uſed by old and young in all diſeaſes that have need of purging, and you need not fear any danger at all: For I know no vomit, which purgeth more gently than this, and if you pleaſe, you may make it work only (*per inferiora*) downward, ſo that it ſhall cauſe no vomits at all: and you need do nothing elſe but make a toaſt of brown bread, and hold it hot to your noſe and mouth, and when this is almoſt cold, have another hot in readineſs, and ſo uſe one after another by turns, till you feel no more loathing, and that the vertue of Antimony hath begun to work downward: This is a good ſecret for thoſe that would uſe Antimonial phyſick, but that they are affraid of vomiting, which they are not able to endure. But if you will not ſpend ſo much pains, as to make ſuch an Extract, then do as you was taught above to do with the copper, and take ten or twelve grains of prepared Antimony for an old body, but for a young one 5, 6. grains or more or leſs according to the condition of the perſon, and ℥ ſs. or ℥ vj. of pure tartar, and together with ℥ iiij. or ℥ v. of water put it in a little pipkin, and boyl it a quarter of an hour, then pour the ſolution only into a cup, and diſolve a little ſugar in it, whereby the acidity of the Tartar will be ſomewhat qualified. The *decoctum* drink warm, and keep your ſelf as it is fit, and it will work much better, than it if had been ſteeped over night in wine, which not every one can abide to take faſting; but this *decoctum*, becauſe it taſteth like warm and ſweet wine, is much pleaſanter to take.

N. B. It is to be admired, that well prepared Antimony is never taken in vain: for although it be given in a very ſmall quantity, ſo that it cannot cauſe either ſtools or vomits, yet it worketh inſenſibly, *viz.* it cleanſeth the blood, and expelleth malignities by ſweat, ſo that mighty diſeaſes may be rooted out thereby without any great ſenſible operation. Which many times hapned unto me, and gave me occaſion to think further of it; and therefore I ſought how to prepare Antimony ſo, that it might be uſed daily without cauſing of vomits or ſtools, which I put in execution accordingly, and found it good, as afterward ſhall follow.

Of the ſolution above deſcribed, *viz.* of the flores of Antimony with tartar make a good quantity, and after the evaporation of the water diſtill a ſpirit of it, and there will alſo come over a black oyl, which muſt be ſeparated from the ſpirit, and rectified *per ſe*; and externally applyed it will not only do the ſame wonderful operations, which above have been aſcribed to the ſimple oyl of tartar, but it goeth alſo far beyond it, for the beſt eſſence of Antimony hath joyned it ſelf thereunto in the diſtilling and ſo doubled the vertue of the oyl of Tartar; and this oyl may with credit be uſed not only for all podagrical tumors to allay them very readily, but alſo by reaſon of its dryneſs it doth conſume all other tumors in the whole body, whether they be cauſed by wind or water: for the volatile ſalt by reaſon of its ſubtlety, conveyeth the vertue of Antimony into the innermoſt parts of the body in a marvellous and incredible way, whereby much good can be performed in Chyrurgery.

As for the ſpirit, you may not only uſe it very ſucceſsfully, in the Plague, Pox, Scurvy, *Melancholia Hypochondriaca*, Feavers, and other obſtructions and corruptions of blood, but alſo if you put ſome of it into new wine or beer, and let it work with it, the wine or beer comes to be ſo vertuous thereby, that if it be daily uſed, it doth ſtay and keep off all diſeaſes proceeding from ſuperfluous humors and corrupted blood, ſo that neither Plague, Scurvy, *Melancholia Hypochondriaca*, or any other diſeaſe of that kind can take root in thoſe that daily uſe it, wherein no metal or mineral (except gold) can be parallel'd with it: but in caſe you have no conveniency to make that ſpirit, and yet you would willingly have ſuch a medicinal drink made of Antimony, then take but of the ſolution made with tartar, before it be diſtilled, and put ℔ j. or ℔ j ſs. of it into 18. or 20. gallons of new wine or beer, and let it work together, and the vertue of the Antimony by the fermentation of the wine will grow the more volatile and efficacious to work. And if you cannot have new wine (in regard that it doth not grow every where) you may make an artificial wine of Honey, Sugar, Pears, Figs, Cherries or the like fruit, as in the following third part ſhall be taught, which may ſtand in ſtead of natural Wine.

Theſe medicinal wines ſerve for a ſure and ſafe preſervative, not only to prevent many diſeaſes, but alſo if they have poſſeſſed the body already, effectually to oppoſe and expel them. Alſo all external open ſores (which by daubing and plaiſtering could not be remedied) by daily drinking thereof may be perfectly cured. For not only *Baſilius Valentinus*, and *Theophraſtus Paracelſus*, but many more before and after them knew it very well, and have written many good things of it, which few did entertain, and (becauſe their deſcription was ſomewhat dark) moſt deſpiſed and defamed them for untruths.

In like manner, and much more may this my writing be lightly eſteemed of, becauſe I do not ſet down long and coſtly proceſſes, but only according to truth, and in ſimplicity do labour to ſerve my neighbour, which doth not ſound well in the ears of the proud world, which rather tickle and load themſelves with vain and unprofitable proceſſes, than harken unto the truth; and it is no wonder, that God ſuffereth ſuch men, which only look after high things, and deſpiſe ſmall things, to be held in Error.

Why do we look to get our Medicines by troubling our brains, & by ſubtle and tedious works, whereas God through ſimple nature doth teach us otherwiſe. Were it not better to let ſimple nature inſtruct us? ſurely if we would be in love with ſmall things, we ſhould find great ones. But becauſe all men do ſtrive only for great and high things, therefore the ſmall alſo are kept from them; and therefore it would be well, that we could fancy this maxim, that alſo things of ſmall account can do ſomething, as we may

may ſee by Tartar and deſpicable Antimony, and not only ſo many coals, glaſſes, materials, and the like, but alſo the pretious time would not be waſted ſo much in preparing of medicaments: for all is not gold that gliſtereth, but oftentimes under a homely coat ſome glorious thing is hid; which ought to be taken notice of.

Some may object why do I teach to joyn the Antimony firſt with the Tartar by the help of common water before its fermentation with the wine: whether it would not be as good to put it in of it ſelf in powder, or to diſſolve it with ſpirit of ſalt (which would be eaſier to do than with Tartar) and ſo let it work? To which I anſwer, that the working wine or drink, receiveth no metallical calx or ſolution, unleſs it be firſt prepared with tartar or ſpirit of wine. For although you diſſolve Antimony, or any other metal or mineral in ſpirit of ſalt, or of vitriol, or of ſalt nitre, or any other acid ſpirit, and then think to let it work with wine or any other drink, you will find that it doth not ſucceed; for the acid ſpirit will hinder the fermentation, and let fall the diſſolved metals, and ſo ſpoyl the work; and beſides, Tartar may be uſed among all drinks, and doth more agree with ones taſte and ſtomach, than any corroſive ſpirit.

In the ſame manner as was taught of Antimony, other minerals and metals alſo may be fitly joyned with wine or other drink, and the uſe of ſuch Antimonial wine is this, *viz.* that it be drank at meals and betwixt meals like other ordinary drink to quench thirſt, but for all that, it muſt not be drank in a greater quantity, than that Nature be able to bear it. For if you would drink of it immoderately, it would excite vomits, which ought not to be, for it is but only to work in an inſenſible way, which if it be done, it preſerveth not only the body from all diſeaſes proceeding from corrupted impure blood, as the Plague, Leproſy, Pox, Scurvy, and the like, but by reaſon of its hidden heat, whereby it doth conſume and expel all evil and ſalt humors (as the Sun dryeth up a pool) by ſweat and urine, and ſo doth unburthen the blood from all ſuch ſharp and hurtful humors, *&c.* It doth not only cure the aboveſaid diſeaſes, but alſo all open ſores, ulcers, fiſtulaes, which by reaſon of the ſuperfluity of ſalt humors can admit of no healing, and it doth diſpatch them in a ſhort time in a wonderful manner, and ſo firmly that there is no relapſe to be feared.

This drink is not only good for the ſick, but alſo for the whole (though in a ſmaller quantity) becauſe that it wonderfully cleanſeth the whole body, and you need not fear the leaſt hurt either in young or old, ſick or healthy. And let no man ſtumble at it, that many ignorant men do defame Antimony and hold it to be poyſon, and forbid it to be uſed; for if they knew it well, they would not do ſo; but becauſe ſuch men know no more, than what they get by reading, or by hear-ſay, they pronounce a falſe ſentence; and it might be replyed unto them, as *Apelles* did to the Shooe-maker; *Ne ſutor ultra crepidam*: but what what ſhall we ſay? *Non omnis fert omnia tellus.* When an Aſs after his death doth rot, out of the carcaſs groweth Beetles, which can fly higher than the Aſs from whence they came; In the like manner we wiſh it may fare with the haters of royal Antimony, *viz.* that their poſterity may get ſeeing eyes, and what they know not, they may forbear to deſpiſe and ſcoff at.

I muſt confeſs, that if Antimony be not well prepared, and beſides, be indiſcreetly uſed by the unskilful, that it may prejudice a man in his health, which even the vegetables alſo may do. But to reject it by reaſon of the abuſe, would be a very unwiſe act: If perchance a child ſhould get into his hand a ſharp-edged knife, and hurt himſelf or others, becauſe it doth not underſtand how to uſe a knife, ſhould therefore the uſe of a knife be rejected and forbidden to thoſe that are grown up and know how to uſe it? Good ſharp tools make a good workman; ſo good quick working and powerful medicines make a good phyſitian; and the ſharper the tool is, the ſooner a ſtone-carver or other craftsman may ſpoyl his work by one cut which he doth amiſs: which alſo muſt be underſtood of powerful medicines, for if they be uſed pertinently, in a ſhort time more good may be done with them, than with weak medicaments in a long time. Now as a ſharp tool is not to be handled but by a good workman, ſo likewiſe a powerful medicine ought to be managed by an underſtanding and conſcientious phyſitian, who according to the condition of the perſon, and the diſeaſe, knows to increaſe or abate the ſtrength of the medicine, and not by ſuch a one, as doth miniſter it ignorantly without making any difference at all.

Let no man marvail, that I aſcribe ſuch great vertues unto Antimony, it being abundantly enriched with the *primum ens* of gold. If I ſhould ſay ten times as much more of it, I ſhould not lye. Its praiſe is not to be expreſſed by any mans tongue; for purifying of the blood, there is no mineral like unto it; for it cleanſeth and purifieth the whole man in the higheſt degree, if it be well prepared firſt, and then diſcreetly uſed. It is the beſt and next friend to gold, which by the ſame alſo is freed and purified from all addition and filth, as we ſaid even now, of man. Every Antimony for the moſt part agreeth with gold and its medicine; for out of Antimony, by the cleanſing Art may be made firm gold, as in the fourth part ſhall be taught, and which is more, by a long digeſtion a good part of the ſame is changed into gold. Whereby it is evident, that it hath the nature and property of gold, and it is better to be uſed for a medicine than gold it ſelf, becauſe the golden vertue is as yet volatile in this, but in the other is grown fixed and compacted, and may be compared to a young child in reſpect of an old man. Therefore it is my advice, that in Antimony medicine ſhould be ſought, and not to trifle away time and coſt in vain and uſeleſs things.

Further note, That if you deſire to contract nearer together the vertue of Antimony or any other mineral or metal, as above was taught to be done with the Tartar, you muſt by exhalation of the ſuperfluous moiſture in Balneo, reduce the ſolution to a honey thick liquor, and pour ſpirit of wine upon it for to extract, and within few days it will be very red; then pour it off and pour on other, and let this likewiſe extract: continue this proceeding with ſhifting the ſpirit of wine, till the ſpirit of wine can get no more Tincture; then put all the coloured ſpirit of wine together into a glaſs with a long neck, and digeſt it ſo long in a warm Balneum, till the colour or beſt eſſence of Antimony be ſeparated from the ſpirit of wine, and ſettled to the bottom like a

blood red thick fat oyl, ſo that the ſpirit of wine is turned white again; which is to be ſeparated from the fair and pleaſant oyl of Antimony, which is made without any corroſive, and is to be kept as a great treaſure in phyſick. The ſpirit of wine retains ſomewhat of the vertue of Antimony, and may be uſed with ſucceſs of it ſelf both inwardly and outwardly. But the Tincture as a Panacea in all diſeaſes acteth its part with admiration, and as here mentioned of Antimony, ſo in the ſame manner all metals by the help of Tartar and ſpirit of wine may without diſtilling be reduced into pleaſant and ſweet oyles, which are none of the meaneſt in Phyſick: for every knowing and skilful Chymiſt will eaſily grant, that ſuch a metallical oyl, as without all corroſives out of the groſs metals is reduced into a pleaſant eſſence, cannot be without great and ſingular vertue.

How to make good ſpirit and oyles out of Pearls, Corals, Crabs-eyes, and other light ſoluble ſtones of beaſts and fiſhes.

TAke to one part of pearls or corals (made into fine powder three or four parts of pure Tartar, and ſo much water as will diſſolve the Tartar by boyling; put the corals, Tartar and water together into a glaſs body, which muſt ſtand in ſand, and give it ſo ſtrong a fire, that the water boyl in the glaſs body with the Tartar, and may diſſolve the corals. (This ſolution may be done alſo in a clean earthen pot that is glaſed, and the evaporated water muſt be ſupplyed with other, as above was taught to be done with the metals.) The corals being diſſolved, let them cool, filtrate the ſolution, and abſtract all the moiſture from it in Balneo, and there will remain a pleaſant honey-thick liquor, which may be uſed in Phyſick either of it ſelf, or elſe once more extracted with ſpirit of wine and purified, or elſe diſtilled, as you pleaſe.

The extract or Tincture is better than the liquor, and the ſpirit is better than the extract or tincture: and all three may well and ſafely be uſed; they ſtrengthen the heart and brain; eſpecially thoſe which are made of pearls and corals, they expel the urin and keep the body ſoluble. Thoſe of crabs eyes and of pearches and other fiſhes open and cleanſe the paſſages of the urin from all ſlime and impurity, and they powerfully expel the ſtone and gravel in the reins and bladder.

N. B. The diſtilled ſpirit of corals being well rectified, is good for the Epilepſy, Melancholy, and Apoplexy. It expelleth and driveth out all poyſon by ſweating, becauſe it is of a golden nature and quality, whereof in another place more ſhall be ſaid.

To diſtill a ſpirit out of ſalt of Tartar and crude Tartar.

IF you take a like quantity of crude Tartar and of ſalt of Tartar, and diſſolve it with clean water, and then evaporate the water ſtill skimming it, till no skin more do riſe, and then let it cool, there will ſhoot white cryſtals, which being diſtilled as common Tartar, they will yield a purer ſubtler and pleaſanter ſpirit, than the crude Tartar doth, in all to be uſed as above hath been taught of the ſimple ſpirit of Tartar: therefore it is needleſs here to deſcribe its uſe. Before you diſtill a ſpirit thereof, you may uſe them in ſtead of *Tartarus vitriolatus* for purging, they will cauſe gentle ſtools, and drive alſo the urin and ſtone, and are not unpleaſant to take. The doſe is from ℈ i. to ʒ i. in waters fit for your purpoſe. This ſalt diſſolved with water purifieth metals (if they be boyled therein) and maketh them fairer then common Tartar doeth.

How to get a powerful ſpirit out of the ſalt of Tartar, by the help of pure ſand, or peble-ſtones.

IN the firſt part of this book I taught how to make ſuch a ſpirit, but becauſe the materials, which are to be diſtilled in that furnace muſt be caſt upon quick coals, whereby the remainder is loſt, and that alſo not every one hath the conveniency to ſet up a furnace that requireth more room than this here doth: therefore I will ſet down how it may be got with eaſe in this our preſent furnace, without the loſs of the remainder, which is not inferior to the ſpirit it ſelf. And it is done thus:

Make a fair white ſalt of calcined Tartar by diſſolution, filtration aud coagulation, pulveriſe that ſalt in a warmed morter, and add to it a fourth part of ſmall pulveriſed cryſtal or flints or only of fine ſand, waſhed clean, mix it well, and caſt one ſpoonful thereof at once into your red-hot veſſel (which muſt be made of earth) and ſo cover it, and the mixture as ſoon as it is red hot, will riſe and boyl (as common Allome doth, when it cometh to a ſudden heat) and yield a thick white heavy ſpirit; and when it ceaſeth to come forth, then caſt in another ſpoonful, and ſtay out the time of its ſettling, and then another part again, till all your mixture be caſt in. When no more ſpirit goeth forth, then take off the lid from the diſtilling veſſel, and with an iron ladle take out that which ſtayed behind, whileſt it is yet red-hot and ſoft, and it will look like unto a tranſparent clear white fuſible glaſs, which you muſt keep from the air, for it will diſſolve in it, till I teach you what you are to do with it.

The ſpirit which came over, may either be kept as it is, or elſe rectified *per arenam* in a glaſs retort, and uſed in Phyſick; it is clean of another taſte than the ſpirit of common ſalt or vitriol, for it is not ſo ſharp; it ſmelleth of the flints after a ſulphureous manner, and taſteth urin-like, and it is very good for thoſe that are troubled with the gout, ſtone and Tiſick: for it provoketh urin and ſweat mightily, and (becauſe it cleanſeth and ſtrengthneth the ſtomach) it alſo maketh one have a good appetite to his Victuals What it can do elſe is unknown to me as yet, but it is credible that it may act its part in many other diſeaſes, which is left free for every one to try. In my opinion (ſince the ſpirit of the ſalt of Tartar is good to be uſed of it ſelf for the ſtone, and that here it is ſtrengthned by the ſand, which have the ſignature of the ſtone of the Microcoſme) there is hardly any particular medicine, which can go beyond it, but I leave every one to his own opinion and experience. Externally uſed, it quencheth inflammations and maketh a pure skin, *&c.* The remainder, which I bid you keep, and looks like a tranſparent clear glaſs, is nothing elſe but the moſt fixed part of the ſalt of Tartar and flints, which joyned themſelves thus in the heat, and turned to a ſoluble glaſs, wherein lyes hid a great heat and fire. As long at it is kept dry from the air, it cannot be perceived in it: but if you pour water upon it, then its ſecret heat will diſcover it ſelf. If you make it to fine powder in a warm morter, and lay it in a moiſt air, it will diſſolve and melt into

into a thick and fat oyl, and leave ſome fæces behind. This fat liquor or oyl of ſtints, ſand or cryſtal may not only be uſed inwardly and outwardly of it ſelf, but alſo ſerveth to prepare minerals and metals into good medicines, or to change them into better by Chymical art. For many great ſecrets are hid in the contemptible peble or ſand; which an ignorant and unexpert man (if they were diſcloſed to him) would hardly believe: for this preſent world is by the divels craft ſo far poſſeſſed with curſed filthy avarice, that they ſeek for nothing but money, but honeſt and ingenious ſciences are not regarded at all; and therefore God doth cloſe our eyes that we cannot ſee what lyeth before them, and we trample upon with our feet. That worthy man *Parcelſus* hath given it us ſufficiently to underſtand, when he ſaith in his book (containing the vexations of Alchymiſts) that many times a deſpicable flint caſt at a Cow is more worth than the Cow; not only becauſe that gold may be melted out of it, but alſo that other inferior metals may be purified thereby, ſo that they are like unto the beſt gold and ſilver in all tryals; and although I never got any great profit by the doing of it, yet it doth ſuffice me that I have ſeen ſeveral times the poſſibility and truth thereof, which in its proper place likewiſe ſhall be taught.

This liquor of flints is of that nature toward the metals, that it maketh them exceeding fair, but not ſo, as women do ſcowre their veſſels of tin, copper, iron, *&c.* with ly and ſmall ſand, till all filth be ſcoured off, and that they get a bright and fair gloſs: but the metals muſt be diſſolved therein by Chymical art, and then either after the wet or dry way digeſted in it for its due ſpace of time; which *Paracelſus* calleth to go into the mothers womb, and be born again: if this be done rightly, then the mother will bring forth a pure child. All metals are engendred in ſand or ſtone, and therefore they may well be called the mother of metals, and the purer the mother is, the purer and ſounder child ſhe will bear, and among all ſtones there is none found purer than the peble, cryſtal or ſand, which are of one nature (if they be ſimple and not impregnated with metals:) And therefore the peble or ſand is found to be the fitteſt bath to waſh the metal withall. But he that would take this bath to be the Philoſophers ſecret Menſtruum, whereby they exalt the King unto the higheſt purity, would be miſtaken; for their Balneum is more friendly to gold by reaſon of its affinity with it than with other metals, but this doth eaſier diſſolve other metals than gold. Whereby it is evident, that it cannot be *Benard* his fountain (*Bernhardi fontina*) but muſt be held only to be a particular cleanſer of metals. But omitting this, and leaving it to the further practiſe and tryal of thoſe that want no time nor conveniency for to ſearch what may be done with it, let us take notice of the uſe of this liquor in phyſick, for which uſes ſake this book is written. That which hath been ſaid, was only done to that end, that we may obſerve, that we muſt not always look upon dear and coſtly things, but that many times even in mean and contemptible things (as ſand & pebles) much good is to be found.

How to extract a blood-red Tincture with ſpirit of wine out of the liquor of peble-ſtones.

IF you will extract a tincture out of peble-ſtones, for uſe in Phyſick or in Alchymy, then in ſtead of the white take a fair yellow, green or blew peble or flint, whether it hold fixed or volatile gold, and firſt with ſalt of tartar diſtill the ſpirit thereof; or if you do not care for the ſpirit, then melt the mixture in a covered crucible into a tranſparent, ſoluble and fuſible glaſs, and in a warm morter make it into fine powder; put this powder in a long necked glaſs, and pour upon it rectified ſpirit of wine (it needeth not to be dephlegmed, it matters not if it be but pure) let it remain upon it in a gentle warmth, till it be turned red (the glaſs with the prepared peble or flints muſt be often ſtirred about, that the peble be divided, and the ſpirit of wine may be able to work upon it) then pour off the coloured ſpirit of wine, and pour on other, and let this likewiſe turn red: this pouring off and on muſt be iterated ſo often, till the ſpirit of wine get no more colour out of it. All the Tinctured ſpirit of wine put together, & abſtract in a Balneum through a Limbeck from the Tincture which will remain in the bottom of the glaſs body like a red juyce, which you muſt take out and keep for its uſe.

The uſe of the Tincture of pebles or flints in Phyſick.

THis Tincture if it be made of gold, pebles or ſand, is to be held for none of the leaſt medicines, for it doth powerfully reſiſt all ſoluble Tartareous coagulations, in the hands, knees, feet, reins and bladder; and although in want of thoſe that hold gold, it be extracted but only out of common white peble, it doth act its part however, though not altogether ſo well as the firſt. Let no man marvel, that ſand or pebles made potable, have ſo great vertue; for not all things are known to all; and this Tincture is more powerful yet, if firſt gold have been diſſolved with the liquor of pebles before the extraction. And let no man imagine that this Tincture comes from the ſalt of Tartar (which is taken to the preparing of the oyl of ſand) becauſe that of it ſelf alſo doth colour the ſpirit of wine, for there is a great difference betwixt this Tincture and that, which is extracted out of the ſalt of Tartar: for if you diſtill that of the ſalt of tartar in a little glaſs body or retort, there will come firſt a clear ſpirit of wine, then an unſavory phlegm, and a ſalt will remain behind, in all like unto common ſalt of tartar, wherein after its calcining not the leaſt colour appeareth, and becauſe none came over neither, it might be queſtioned where it remained then?

To which I anſwer, that it was not a true tincture, but only that the ſulphur in the ſpirit of wine was exalted or graduated by the corporeal ſalt of tartar, and ſo got a red colour, which it loſeth as ſoon as the ſalt of tartar is taken from it, and reaſſumeth its former white colour: even as it hapneth alſo, when the ſalt of urin, or of harts-horn or ſoot, or any other like urinous ſalt is digeſted with ſpirit of wine, that the ſpirit turneth red of it, but not laſtingly, but juſt ſo as it falls out with the ſalt of tartar, for if by rectification it be ſeparated again from the ſpirit of wine, each (*viz.* both the ſalt and alſo the ſpirit of wine) doth recover again its former colour, whereby it appeareth, that (as above ſaid) it was not a true tincture. He that will not believe it, let him diſſolve but ℥ i. of common white ſalt of tartar in ℔ i. of ſpirit of wine, and the ſpirit will turn as red of it, as if it had ſtood a long time upon ſeveral pounds of blew or green calcined ſalt of tartar; and if I had not tryed it my ſelf ſeveral times, I ſhould have alſo been of that opinion:

but becauſe I found it to be otherwiſe, therefore I would not omit to ſet down my opinion: though I know I ſhall deſerve ſmall thanks of ſome, eſpecially of thoſe which rather will err with the greater number, than to know and confeſs the truth with the leſs number. However, I do not ſay, that the ſuppoſed tincture of the ſalt of Tartar is of no vertue or uſeleſs; for I know well enough that it is found very effectual in many diſeaſes: for the pureſt part of the ſalt of Tartar hath been diſſolved by the ſpirit of wine, it being thus coloured thereby, and therefore that tinctured ſpirit of wine may very fitly be uſed. But as for the Tincture, which is extracted out of the prepared pebles, it is clean of another condition: for if you abſtract the ſpirit of wine from it, though it alſo cometh over white, yet there remaineth a deep tinctured ſalt, whoſe colour is laſting in the ſtrongeſt fire, and therefore may be counted a true Tincture.

How by the help of this liquor out of Gold its red colour may be extracted ſo that it remains white.

THis oyl or liquor of pebles is of ſuch a condition, that it doth precipitate all metals which are diſſolved by corroſives, but not after that manner as the ſalt of Tartar doth; for the calx of metals which is precipitated by this liquor; (becauſe that the pebles do mingle themſelves therewith) is grown much heavier thereby, than if it had been only precipitated with ſalt of Tartar.

For example, diſſolve in *Aqua Regia* as much Gold as you pleaſe, and pour of this liquor upon it, till all the Gold fall to the bottom like a yellow powder, and the ſolution turn white and clear, which you muſt pour off, and edulcorate the precipitated Gold with ſweet water, and then dry it (as you was taught to do with the *Aurum fulminans*) and you need not fear that it will kindle and fulminate in the drying, as it uſeth to do, when it is precipitated with ſalt of Tartar or ſpirit of urin, but you may boldly dry it by the fire, and it will look like yellow earth, and will weigh as heavy again as the Gold did weigh before the ſolution; the cauſe of which weight is, the peble ſtones, which did precipitate themſelves together with the Gold. For the *Aqua Regia* by its acidity hath mortified the ſalt of Tartar, and robbed it of its vertues ſo, that it could not chooſe but let fall the aſſumed pebles or ſand; on the other ſide, the ſalt of Tartar which was in the liquor of pebles, hath annihilated the ſharpneſs of the *Aqua Regia*, ſo that it could not keep the diſſolved gold any longer, whereby both the gold and the pebles are freed from their diſſolver.

This edulcorated and dryed yellow powder put into a clean crucible, and ſet it between live coals, that it begin to be red hot, but not long, and the yellow will be changed into the faireſt purple colour, which is pleaſant to behold, but if you let it ſtand longer, then the purple colour vaniſheth, and it turns to a brown and brick colour: and therefore if you deſire to have a fair purple coloured gold, you muſt take it off from the fire, as ſoon as it is come to that colour, and let it not ſtand any longer, elſe it loſeth that colour again.

This fair gold-powder may be uſed by the rich (which are able to pay for it) from ℈i. to ʒſs. in convenient vehicles; and in all diſeaſes, where ſweating is needful: for beſides the provoking of ſweat, it comforteth not only the heart, but alſo by the vertue of the peble it expelleth the ſtone in the reins and bladder (if it be not grown to the height of hardneſs) like ſand together with the urine: ſo that it may be ſafely uſed as well to prevent, as to cure the plague, gout and ſtone.

How to make further out of this purple coloured gold a ſoluble Ruby for medicinal uſe, ſhall be taught in the fourth part: for in regard that it muſt be done by a ſtrong fire in a crucible, it doth not belong hither, but to its proper place, where other like Medicaments are taught to be made.

If you will extract the colour out of this precipitated gold, then pour upon it (before it be put into the fire for to calcin) of the ſtrongeſt ſpirit of ſalt, and in a gentle heat the ſpirit will diſſolve part of the gold, which will be much fairer and deeper in colour, than if it had been done with *Aqua Regia*: upon this ſolution pour five or ſix times as much of dephlegmed ſpirit of wine, and digeſt both together its due time, then by the digeſtion of a long time, part of the Gold will fall out of the ſolution to the bottom like a fair white pouder, which may be reduced with Borax or ſalt nitre and Tartar; it is white like ſilver, and as heavy as other gold, and may eaſily get its colour again by the help of Antimony. The reſidue out of which the white gold is faln, *viz.* the ſpirit of ſalt mingled with the ſpirit of wine, muſt be abſtracted from the Tincture, and there will remain a pleaſant ſowre liquor coloured by the gold, upon the bottom of the glaſs body, which is almoſt of the ſame vertue, which above hath been aſcribed to other tinctures of gold. Eſpecially this liquor of gold ſtrengthneth the heart, brain, and ſtomach.

N. B. Sometimes there comes over with the ſpirit of wine a little red oyl, which the ſtrong ſpirit of ſalt hath ſeparated from the ſpirit of wine, and it is impregnated with the Tincture of Gold. It is an excellent cordial, few are found like unto it, whereby weak people decayed by ſickneſs or age, may be kept alive a long time, they taking daily ſome drops of it, who elſe for want of the *humidum radicale*, would be forced to exchange their life for death.

Here ſome body may ask, whether this Tincture is to be counted or taken for a true Tincture of Gold; or whether there be another better to be found?

To which I anſwer, that though many may hold it to be ſuch, and I my ſelf do call it ſo here, yet that after due examination it will not prove to be ſuch: for although ſome vertue is taken from the gold by this way, yet it doth ſtill keep its life, though it be grown weak and pale, becauſe it can ſo eaſily recover its former ſound colour by a contemptible mineral: if its true Tincture or ſoul were gone from it, ſurely an inferiour mineral could not reſtore it to life, but of neceſſity there would be required ſuch a thing for to do it, which hath not only ſo much, as it hath need of for it ſelf, but hath a tranſcendent power to give life unto dead things. As we may ſee by a man or any ſenſible beaſt, that if they have loſt their vigor by adverſities, in that no life more is perceived in them, yet by medicines fit for the purpoſe, they may be refreſhed, and brought to their former health, ſo that their former diſeaſe appeareth no more in them: but if their ſoul be once gone, the

dead

dead body can by no medicines be reſtored unto life again, but muſt remain dead ſo long, till he in whoſe power it is to give and to take life, have mercy upon it. So likewiſe it is to be underſtood of gold, when its colour is taken from it, and yet its life is left, which by the help of Antimony, being its medicine, as alſo by the help of iron or copper can be reſtored unto it, ſo that it recovereth its former fair colours, ſo that you cannot ſee at all, that it ailed any thing before. But if its life be gone from the body, it is impoſſible for any ordinary metal or mineral to reſtore it to life, but it muſt be done by ſuch a thing, which is more than Gold it ſelf hath been: for even as a living man cannot give life unto a dead man, but GOD muſt do it who hath created man; ſo Gold cannot reſtore to dead Gold, the life which hath been taken from it, and how could it then be done by an unfixt mineral? But there is required a true Philoſopher for to do it, ſuch a one as hath good knowledge of gold and its compoſition.

Now as we heard that like cannot help its like, but he that ſhall help, muſt be more, than he that looks for help from him: Hence it is evident, that the Tincture, whoſe remaining body (from which it is taken) is ſtill gold, can be no true tincture; for if it ſhall be a true tincture, it muſt conſiſt in its three principles, and how can it conſiſt therein, the body from whence it came being yet alive, and poſſeſſing inviſibly all its three principles? How can a mans ſoul be taken from him, and yet the body live ſtill? Some will ſay, that for all that, this may be counted a true tincture, although the body ſtill remain gold, and have kept its life: even as man may ſpare ſome blood out of his body, which though it will make him ſomewhat pale, yet he liveth ſtill, and the loſt blood may be ſupplyed again by good meat and drink. But what lame and ſenſeleſs objections are theſe? Who would be ſo ſimple as to think, that a handful of blood may be compared to a mans life? I believe no wiſe man will do it. Although life goeth forth with the blood, yet the blood is not the life it ſelf; elſe the dead could be raiſed thereby, if a cup full of it were poured into a dead body; but where was ſuch a thing ever heard or ſeen? With ſuch groundleſs opinions ſome did preſume to cenſure the truth, ſet down in my treatiſe *de Auro potabili vero*, ſaying, *Geber* and *Lullius* were alſo of opinion, that a true tincture can be extracted out of gold, the ſame nevertheleſs remaining good gold: but it may be asked, what it hath loſt then for to yield a true Tincture, ſince it remained good gold? Here no body will be at home for to anſwer I doubt. What are the Writings of *Geber* or *Lully* to me? What they have written I do not deſpiſe, they were highly enlightned and experienced Philoſophers, and would defend their writings ſufficiently, if they were alive: and what I write, I am alſo able to maintain.

Do thoſe men think, that the writings of *Geber* and *Lully* are to be underſtood according unto the bare letter? ſhew me a tincture of gold which was made by the writings of *Geber* or *Lully*? if it were ſo, then every idiot or novice, that could but read Latine, would not only by their writings be able to make the Tincture of gold, but alſo the Philoſophers ſtone it ſelf, whereof they have written at large; which doth not follow, becauſe it is ſeen by daily experience, that the moſt worldly learned men ſpent many years, and have been at vaſt charges, and taken great pains, and ſtudied in their books day and night, and found not the leaſt thing in them.

Now if ſuch Philoſophers were to be underſtood literally, doubtleſs there would not be ſo many poor decay'd Alchymiſts. Therefore the writings of ſuch worthies are not to be underſtood according to the letter, but according to the myſtical ſenſe hid under the letter.

But becauſe the truth is eclipſed in their books by ſo many ſeducing and ſophiſtical proceſſes, there will hardly any man be able to pick it out from ſo many ſeducements, unleſs a light from God be given to him firſt, whereby he may be able ſo to peruſe the dark writings of thoſe men, that he know how to ſeparate the parabolical ſpeeches, from thoſe that are true in the letter it ſelf: or if an honeſt Godly Chymiſt by the grace of God in his labours do hit upon the right ſteps, and yet do doubt, whether he be in the right way or no, then by reading of good and true Philoſophers books, he may at laſt learn out of them the firm and conſtant truth: elſe hardly any ones deſire may be obtained out of their books, but rather after the pretious time ſpent, means and health waſted, a man ſhall be forced to fall a begging at laſt.

In like manner, if the true tincture be taken from Copper, the reſt is no more a metal, nor by any Art or force of fire can be reduced to a metallical ſubſtance.

N. B. But if you leave ſome tincture in it, then it may be reduced into a brittle gray body, like unto iron, but brittle.

Another way to extract a good Tincture out of gold by the help of the liquor of ſand or pebles.

TAke of that gold calx (which was precipitated with the oyl of ſand) one part, and three or four parts of the liquor of cryſtals or of ſand, mix the gold calx in a good crucible with the liquor, and ſet this mixture into a gentle heat, ſo that the moyſtneſs may evaporate from the oyl of ſand which is not eaſily done; for the peble or ſand, by reaſon of their dryneſs keep and hold the moyſtneſs, and will not let it go eaſily; it riſeth in the pot or crucible, as borax or Allome doth when you calcine them; therefore the crucible, muſt not be filled above half, that the liquor together with the gold may have room enough, and do not run over the pot: and when it riſeth no more, then ſtrengthen the fire, till the pot be red-hot. The mixture ſtanding faſt, put a lid upon it, which may cloſe well, that no coals, aſhes, or other impurity may fall into it, and give it ſo ſtrong fire in a winde furnace, that the liquor together with the gold calx may melt like water; keep it melting ſo long, till the liquor and gold together be like unto a tranſparent fair ruby, which will be done in an hours time or thereabouts; then pour it forth into a clean copper morter, let it cool, and then make it into powder, and pour ſpirit of wine upon it for to extract, which will look like unto thin blood: and will prove more effectual in uſe, than the above deſcribed Tincture.

The reſidue from which the Tincture is extracted, muſt be boyled with lead, and precipitated and driven off as you do oares, and you will get the remaining gold, which went not into the ſpirit of

wine; but it is very pale and turned like unto ſilver in colour, which if it be melted by Antimony, it recovereth its former colour without any conſiderable loſs in the weight. How the melting in crucibles, and boyling of the remaining gold is to be done, ſhall be more punctually ſet down in the fourth part; I know ſeveral other fine proceſſes, for to extract the colour eaſily out of gold; but becauſe the gold muſt be firſt made fit for it by melting in a crucible, and that it is not pertinent to ſpeak of that operation here in this ſecond part, therefore it ſhall be reſerved for the fourth, where you ſhall be informed at large, not onely how to prepare Gold, Antimony and other minerals, and make them fit for extraction, but alſo how to reduce them into a tranſparent, ſoluble and fire-proof Ruby (which are none of the meaneſt medicines) and as it was done here with the gold, ſo you may proceed likewiſe with other metals and minerals for to extract their colours. And therefore being needleſs to deſcribe each metals tincture by it ſelf, all the proceſſes of them ſhall be diſcloſed in one, *viz.* in that of gold. The book would grow too big, if I ſhould deſcribe them ſeverally, which I count needleſs to do. Let this ſuffice for this Second part, that we have taught, how to extract out of the gold its colour after a common way. Which indeed are good medicines, but for ought I know of no uſe in Alchymy. But he that ſeeketh to have a true Tincture out of gold, let him endeavour firſt to deſtroy the gold by the univerſal Mercury, and to turn the inſide outward, and the outſide inward, and proceed further according unto art, then the ſoul of gold will eaſily joyn it ſelf with the ſpirit of wine, and come to be a good medicine, whereof more in my treatiſe *de auro potabili* is handled. If one know the *Chalybs* of *Sandivogius*, which is well to be had, he might with little labour quickly get a good medicine: but becauſe we ſhew our ſelves ſtill ungrateful children unto God, therefore it is no marvel, that he withdraweth his hand from us, and leaveth us in errors.

What further may be done with the liquor of pebles.

Many more profitable things, as well in Alchymy, as in medicine, may be compaſſed by the oyl of ſand; as for example, to make fair painting colours out of metals, which abide in all elements: Alſo to frame all ſorts of tranſparent hard ſtones out of cryſtal, which in beauty are like unto the natural, yea fairer ſometimes; alſo how to make many fair Amauſes or Enamels and the like profitable arts: but they belonging not to this ſecond part, ſhall be reſerved for the fourth, where all ſuch ſhall be taught very punctually with all the circumſtances thereunto relating.

How by the help of this liquor to make trees to grow out of metals, with their colours.

Although this proceſs in Phyſick may be of no great uſe: yet in regard that to a Chymical Phyſitian it gives good information of the condition of natural things, and their change. I thought it not amiſs to ſet it down here.

TAke of the above deſcribed oyl made of ſand, pebles or cryſtals as much as you pleaſe, mix therewith a like quantity of the lixivium of Tartar, ſhake both well together, ſo that the thick liquor may not be perceived in the lixivium, but be throughly incorporated therewith, both being turned to a thin ſolution, and then your water is prepared, wherein the metals do grow.

The metals muſt be firſt diſſolved in their proper corroſive *Menſtruums*, and the *Menſtruum* muſt be quite abſtracted from thence again, but not too near, that the calx of the metal may not grow red-hot, whereby its growing vertue would be taken from it. Then take it out of the little glaſs-body, and break it in pieces about the bigneſs of a pulſe, and put them in the above deſcribed liquor in a cleer bright glaſs, that the growing of the metals may be diſcerned through it; and as ſoon as the prepared metals are taken out of the glaſs body, they muſt be kept from the aire, elſe they loſe their growing vertue. Therefore thus dry they muſt be broken in pieces, and laid in the bottom of the glaſs (wherein the liquor is) a fingers breadth one from another aſunder, and muſt not be laid together on a heap. The glaſs muſt ſtand ſtill in a quiet place, and the metal will preſently ſwell in it, and thruſt forth ſome bulks, out of which branches and twigs do grow, ſo finely, that one ſhall admire at it; and let none think that this growing ſerveth only for to pleaſe the eye, for ſome ſpecial thing is hid in it; for all ſand or pebles, although they be white, inviſibly containeth a hidden tincture or golden ſulphur, which none without experience will be able to believe; for if for a time you digeſt the pure filings of lead in it, there will gold come to ſtick to the outſide thereof (which gold may be waſhed off with water) and the lead will look as if it were gilded. Which gold came from no where elſe but from the ſand or pebles, although they were white and clear, ſo that it could not be perceived in them. It ſheweth alſo its meliorating vertue, when the metals do grow therein, and for a certain ſpace of time are digeſted therewith. For it may be ſeen apparently, that the metals in the growing do increaſe from this liquor, and attract what is for their turn; which hence alſo may be perceived, that when but as much as the bigneſs of a pea groweth therein, it will grow twice or thrice as big, which is worthy to be conſidered of. Alſo the pebles or ſand-ſtones are the natural matrixes of metals, and there appeareth a great ſympathy between them, eſpecially between the unripe metals and them; as if nature ſhould ſay to ſuch raw or unripe metals, return into your mothers womb, and ſtay there the due time, till you have attained there to perfect ripeneſs, for you were taken thence too ſoon againſt my will. Further, out of this liquor there may be made a good borras to reduce the metals thereby. There may be made alſo with this liqour fair glaſed and firm colours upon earthen veſſels like unto Porcellan or China. Alſo by boyling it with water, a tender impalpable ſnow-white earth may be precipitated out of it, whereof there may be made veſſels like unto Porcellan.

Many other uſeful things may be brought to paſs thereby in mechanical buſineſſes, needleſs here to relate.

Alſo the unripe and volatile minerals may be fixed and ripened thereby, ſo that not only they may be the fitter to be uſed in Phyſick, but alſo the volatile gold and ſilver contained in them may be ſaved thereby, whereof more in the fourth part.

N. B. Hither belongs alſo the proceſs of the ſpirit of lead, Virgins-milk and Dragons blood

Of

Of the ſpirit of urine and of the volatile ſpirit of ſalt Armoniack.

OUt of urine or ſalt Armoniack, a powerful and penetrating ſpirit may be made ſeveral wayes, which not only is to be uſed in phiſick for many diſeaſes, but is alſo found very uſeful in mechanical and chymical operations, as followeth.

Take of the urine of ſound men living chaſt, gather a good quantity together in a wooden veſſel, let it ſtand for its time to putrefy, and diſtil a ſpirit thereof, which afterward in a great glaſs retort with a wide neck muſt be rectified from calcined tartar, and ſtill that which cometh over firſt, may be ſaved by it ſelf, and ſo the ſecond and third alſo, the ſtrongeſt may be uſed for the preparing of metallical medicines, and the weaker for a medicine alone by its ſelf, or elſe mingled with fit vehicles: The ſalt which in the rectification cometh over with the ſtrongeſt ſpirit; may be put to the weakeſt, to make it the ſtronger, or elſe it may be ſaved by it ſelf in a good ſtrong glaſs.

But becauſe the ſpirit of urine is tedious to make, therefore I will ſhew, how to get it eaſier out of ſalt Armoniack. The preparation is thus.

Take of ſalt armoniack, and *lapis calaminaris*, and make each by it ſelf into powder, and then mix them together, and caſt of it into the red hot veſſel at once no more than ʒ *ſs.* or ʒ i. Unto the veſſel there muſt be applyed a great receiver: for this ſpirit goeth with ſuch a force and power, that it were impoſſible to diſtil it in a retort without danger or loſs, for I broke more than one receiver with it, before I did invent this inſtrument. The ſpirits being well ſetled in the receiver, caſt in more of your mixture; this continue ſo long till all your matter is caſt in; then take off the receiver, and pour the ſpirit into a ſtrong glaſs, which muſt be well cloſed at the top, but not with wax and a bladder, becauſe it ſofteneth the wax, and doth penetrate through the bladder; but firſt ſtop it with paper, then melt Lacca or ſulphur, and pour it upon it, ſo that it come to be very well cloſed, and then it will not be able to exhale, or thou mayſt get ſuch glaſſes made, as in the fifth part ſhall be tanght, for to keep all the ſubtle ſpirits in them, for more ſecurity ſake. And this ſpirit, if no water have been mixt with it in the receiver, needeth no rectifying: but he that will have it ſtronger yet, may rectify it by a glaſs retort, and ſo keep it for uſe.

And this is the beſt way to make a ſtrong ſpirit out of ſalt armoniack: the ſame may be done alſo, by taking of filed Zinck, inſtead of *lapis calaminaris:* alſo by adding of ſalt of tartar, ſalt made of the Lee of wood aſhes, unquencht lime, and the like: but the ſpirit is nothing near ſo ſtrong (although all thoſe things may be done with it, that are done with the former) as that which is made with *lapis calaminaris* or Zinck.

The proceſs or the manner of making it, is this:

TAke ℔ i. of ſalt armoniack made into powder, and as much of ſalt of tartar, mix both together by the help of a lye made of tartar, or only with common water, ſo that all come to be like a pap, and caſt in one ſpoonful thereof at once into the diſtilling veſſel, then caſt in more till you have ſpirit enough.

N. B. The ſalt of tartar may alſo be mixed dry with the ſalt Armoniack without any lye or water, and ſo diſtilled: but it is not ſo good, as when the mixture is tempered with lye or water: for if it be caſt in dry, the ſpirit will come over in the form of a volatile ſalt: but if the mixture have been moiſtened, then moſt part thereof will come over like a fiery burning ſpirit: In like manner alſo the mixture of Lyme and ſalt Armoniack may be tempered moiſt, and it will yield more ſpirit than if it be diſtilled dry.

It may be asked: why *lapis calaminaris*, Zinck and unquencht lyme, calcined tartar, ſalt of potaſhes, fixed ſalt nitre or the like things prepared by the fire, muſt be added unto ſalt Armoniack, and whether it be not as good to add ſome bolus, or other earth (as uſually is done to other ſalts) and ſo to diſtil a ſpirit of it? To which I anſwer, that there are two ſorts of ſalt in ſalt Armoniack, *viz.* a common acid ſalt, and a volatile ſalt of urine, which without mortifying of one of them, cannot be ſeparated: for as ſoon as they feel the heat, the volatile ſalt of urine carrieth the acid ſalt upwards, and they both together yield a ſublimate, of the ſame nature and eſſence with common ſalt armoniack which is not ſublimed, onely it is purer than the common. And no ſpirit would come over from it, if it ſhould be mingled with bole, brick, duſt, ſand, or any other ſtrengthleſs earth, and ſo diſtilled, but the whole ſalt as it is of it ſelf (leaving its earthy ſubſtance behind) would ſublime thus dry: but that it falleth out otherwiſe with the *lapis calaminaris* (which is alſo like an earth) ſo that a ſeparation of the ſalts is wrought thereby, and a volatile ſpirit cometh over; the reaſon is, that the *lapis calaminaris* and Zinck are of ſuch a nature, that they have a great affinity with all acid things, and do love them, and are loved by them likewiſe (whereof ſome mention hath been made in the firſt part) ſo that the acid ſalt ſticks to it in the warmth, and uniteth it ſelf with it, and the volatile ſalt is ſet free, and diſtilled into a ſubtle ſpirit; which could not have been done, if the acid ſalt had not been kept back, by the *lapis calaminaris* or Zink. But that a ſpirit is diſtilled off by addition of fixed ſalts; the reaſon is that fixed ſalts are contrary unto acid ſalts, and (if they get the uperhand) do kill the ſame, and rob them of their ſtrength, whereby thoſe things which are mixed with them are freed from their bond: and ſo it falls out here with ſalt armoniack, that when by addition of a vegetable fixed ſalt, the acidity of the ſalt armoniack is killed; the ſalt of urine, which formerly was bound therewith, gets its former freedome and ſtrength, and being ſublimed turns into a ſpirit. Which could not have been done, if common ſalt had been added to the ſalt armoniack inſtead of ſalt of tartar; for the ſalt of urine would thereby (as by a far greater enemy be killed and kept back, ſo that it could yield no ſpirit. I thought fit to give notice hereof to the ignorant (not for thoſe, who knew it before) and to the unknowing it will do much good, and that they may have a light for other labours: for I have many times ſeen, and ſee it ſtill by daily experience, that the moſt part of vulgar Chymiſts, whatſoever they do

(having got it either by reading, ſeeing, or hearing) they hurle it over like botchers, and are not able to give any ſolid reaſon, why this or that muſt fall out in ſuch or another manner, not labouring to find out the natures and couditions of ſalts, minerals, and other materials, but contenting themſelves onely with the Receipt, ſaying this or that Author hath written ſo, and therefore it muſt be ſo, whereas many times ſuch books are patcht up out of all ſorts of authors. And thoſe that ſtick to ſo many books, will hardly ever come to get any good, but are led out of one Labyrinth into another, ſpending their life miſerably in watching and cares: but if they would firſt ſeriouſly conſider things, and learn to know nature, and then take their work in hand, then they would ſooner attain unto true knowledge; and ſo much of this matter by the way. I hope that he that hath been in error will be pleaſed with it, and the knowing will not grudge to have it imparted to the ignorant.

That which remains after the diſtillation is done, is alſo good for uſe; if the addition have been of ſalt of tartar, a melting powder may be made of it, to reduce metals. Of *lapis calaminaris* or Zinck, yields *per deliquium* a clear, white, and heavy ſharp oyl, for the ſharper part of ſalt armoniack, which did not turn to ſpirit, hath diſſolved the *lapis calaminaris*, and is almoſt of the ſame vertues for external uſe in Chyrurgery with that, which above in the firſt part which was taught to be made out of *lapis calaminaris*, and ſpirit of ſalt, ſave only that this in the diſtilling doth not yield ſo ſtrong a ſpirit as the other, but onely yields a ſharp ſublimate.

Of the uſe and vertue of the ſpirit of ſalt Armoniack.

THis ſpirit is of a ſharp penetrating eſſence, and of an airy, moiſt, and warm nature; and therefore may with credit be uſed in many diſeaſes, 8, 10, 12. (more or leſs) drops thereof uſed in a convenient vehicle, do immediately penetrate all the body over, cauſing ſudden ſweating, opening the obſtructions of the ſpleen, and diſperſing and expelling many malignities by ſweat and urine, it cureth the quartane, collick, the ſuffocation of the Matrix, and many more diſeaſes.

In brief, this ſpirit is a ſafe, ſure, and ready medicine for to diſperſe and expel all tough, groſs and venemous humors. Alſo, this ſpirit acteth his part externally, quenching all inflammations, curing the Eryſipelas and Grangrene; it allayeth the pains of the gout, clothes being dipt in it and applyed: and although it draw bliſters, it matters not; laid to the pulſe, it is good in ardent feavers, it aſſwageth ſwellings and pains; diſſcuſſeth congealed blood, helpeth ſtrained limbs, and benummed nerves: onely ſmelled unto, it cureth the megrim, and other Chronical diſeaſes of the head: for it diſſolveth the peccant matter, and evacuateth it through the noſtrils; it reſtoreth the loſt hearing, being externally laid on with a little inſtrument fit for the purpoſe. Alſo in the obſtructions of womens courſes applyed by a fit inſtrument in a ſpiritual way, openeth preſently, and cleanſeth the womb, and maketh women fruitful, *&c.* Mingled with common water, and held in the mouth, aſſwageth the tooth-ach, proceeding from ſharp humors which are falln in the teeth. A little of it applyed in a gliſter, killeth the wormes in the body, and allayeth the colick.

This ſpirit may alſo further be uſed to many other things, eſpecially by means thereof many pretious and effectual medicaments may be made out of metals and minerals, whereof ſome ſhall be deſcribed as followeth.

N. B. There is yet another matter, which is found every where and at all times, and is to be got by every one without diſtillation and charges, and is as good for the aboveſaid diſeaſes, as the diſtilled ſpirit, and if all men knew it, there would not be found every where ſo many ſick people, nor ſo many Doctors and Apothecaries.

To diſtill a blood red oyl of vitriol by the help of the ſpirit of urin.

DIſſolve Hungarian or other good vitriol in common water, and let it run through a filtring paper, pour of this ſpirit upon it ſo much, till all the green be vaniſht, and the water be made clear, and a yellow ſulphur be ſettled: then pour off the clear, and the reſt which is muddy, pour together in a *filtrum*, that the moiſture may run off, and the earth of the vitriol remain in the paper, which you muſt dry, and diſtil to a blood-red oyl, which will open the obſtructions of the whole body, and perfectly cure the epilepſie. The clear water muſt be evaporated dry, and there will remain a ſalt, which being diſtilled, yields a wonderful ſpirit. Before it be diſtilled, it is a *ſpecificum purgans*, whereof 8. 10. 12. to 24. grains taken, may ſafely be uſed in all diſeaſes.

The Tincture of Vegetables.

SPices, ſeeds or flowers being extracted therewith and digeſted and diſtilled, the eſſence of them will come over with it, in the form of a red oyl.

Vitriol of copper.

IF you pour it upon calx of copper, made by often heating the Copper red hot and quenching it again, it will extract within an hours time a fair blew colour, and having diſſolved as much thereof as it can pour it off and let it ſhoot in a cold place, and you will get a fair sky coloured vitriol, a ſmall quantity whereof will cauſe ſtrong vomits; the reſt of the vitriol remaineth a blew oyl, good to be uſed in ulcers.

The Tincture of crude Tartar.

IF you take common crude tartar, and pour of this ſpirit upon it, and ſet it in digeſtion, the ſpirit will extract a blood-red tincture, and if the ſpirit be abſtracted from it, there will remain a pleaſant red oyl, of no ſmall vertue and power.

To make the oyls or liquors of ſalts.

THis ſpirit alſo diſſolveth cryſtals and other ſtones, they being firſt diſſolved, precipitated and reduced to impalpable powders, turning them into oyles and liquors, good to be uſed in Alchymy and Phyſick.

The

To precipitate all metals with it.

ANy metal being diſſolved in an acid ſpirit may be precipitated better and purer therewith, than with the liquor of the ſalt of tartar; for *Aurum fulminans* which is precipitated with it fulminateth far ſtronger than if it were done with oyl of tartar.

R. Some juyce of Lemon and mix it with the ſolution of gold, before it be precipitated, and then not all the gold will precipitate, but ſome of it will remain in the ſolution, and in time many ſmall green ſtones (not unlike unto common vitriol) will appear; which in a ſmall doſe will purge all noxious humors.

The oyl and vitriol of ſilver.

IF you diſſolve ſilver in *Aqua fortis*, and pour ſo much of this ſpirit into it till it ceaſeth to make a noiſe, ſome of the ſilver will precipitate in the form of a black powder, the reſt of the ſilver remaineth in the liquor: the phlegm abſtracted from it in Balneo, till it get a skin at the top, and then ſet into a cool place, there will grow white cryſtals in it, which being taken out and dryed are a good purge in madneſs, dropſie, feavers and other diſeaſes, ſafely and without danger to be uſed to young and old. The reſt of the liquor which did not cryſtalliſe may be extracted with ſpirit of wine, and the fæces being caſt away the extraction will be pleaſanter. The ſpirit of wine abſtracted from it, there will remain a medicine of no ſmall value in all diſeaſes of the brain.

To extract a red Tincture out of Antimony or common ſulphur.

BOyl ſulphur or Antimony made into powder in a Lixivium of ſalt of tartar, till it turn red, and pour this ſpirit upon it, and diſtill gently in a *Balneum*, and there will come over a fair tincture with the volatile ſpirit, ſilver anointed therewith will be guilt, though not laſtingly. It ſerveth for all diſeaſes of the lungs.

How to ripen Antimony and common ſulphur, ſo that ſeveral ſorts of ſuch ſmels, as vegetables have, ariſe from thence.

DIſſolve Antimony or ſulphur in the liquor of pebles or ſand, coagulate the ſolution to a red maſs; upon this maſs pour ſpirit of urin, and let it extract in a gentle warmth. The ſpirit being coloured red, pour it off, and pour on other ſpirit, let it extract likewiſe, and this you muſt iterate ſo often, till the ſpirit will extract no more tincture; then pour all the extracts together and abſtract the ſpirit of urin from it in Balneum through a limbeck, and there will remain a blood red liquor, and if you pour upon this ſpirit of wine it will extract a fairer tincture then the former was, leaving the fæces behind, and this tincture ſmelleth like garlick: and if it be digeſted three or four weeks in a gentle warmth, it will get a very pleaſant ſmel, like unto the yellow prunes or plums: and if it remain longer yet in digeſtion, it will get a ſmel not inferior to muſk and ambar; This tincture having been digeſted a long time, and got ſeveral ſmels, is not only notably by the fire increaſed in pleaſantneſs of ſmel and taſte, but alſo in vertue: for ſo many and various ſweet ſmels are perceived in it, that it is to be admired, which variety and exaltation proceedeth only from the pure and ripening ſpirit of urin, for there is hid in it a fire, which doth not deſtroy but preſerve and graduate all colours, whereof in another place more ſhall be ſaid.

N. B. Betwixt the ſpirit of urin and the animal and mineral Copper their appeareth a great ſympathy; for it doth not only love copper above all other metals, and mingleth eaſily with it, and maketh it extraordinary fair, and of good uſe in Phyſick, but it prepareth it alſo to ſuch a medicine, whereby all venerous ſores (both by inward and outward uſe) how deep ſo ever they took root in the blood, without the uſe of any other medicaments, are perfectly cured; it maketh fruitful and barren, according as it is uſed; it cleanſeth the matrix, hindreth the riſing thereof, and miraculouſly furthereth womens courſes that have been ſtayed, above all other medicaments of what name ſoever.

If this ſpirit be mingled with the volatile (but not corroſive) ſpirit of vitriol or common ſalt there will come a ſalt out of it, which is inferior to none in fuſibleneſs, and uſeful both in Alchymy and Phyſick.

N. B. The liquor of the ſalt of tartar, and the ſpirit of wine do not mix without water, this being the mean partaking of both of their natures, and if you add unto it ſpirit of urin it will not mingle but keep its own place: ſo that theſe three ſorts of liquors, being put in the ſame glaſs, and though they be ſhaked never ſo much will not incorporate for all that: the liquor of the ſalt of tartar keepeth to the bottom, next to it will be the ſpirit of urin, and on the top of that is the ſpirit of wine: and if you pour a diſtilled oyl upon it, that will keep uppermoſt of all, ſo that you may keep four ſorts of liquors in one glaſs, whereof none is mingled with the other,

Although this be of no great profit, yet it ſerveth for to learn thereby the difference of ſpirits.

Of the ſpirit and oyl of Harts-horn.

TAke Harts-horn, cut it with a ſaw into pieces, of the bigneſs of a finger, and caſt in one at a time into the aforeſaid diſtilling veſſel, and when the ſpirits are ſettled, then another, and continne this until you have ſpirits enough: and the veſſel being filled with the pieces that were caſt in, take them out with the tongs, and caſt in others, and do this as often as is needful. The diſtilling being finiſhed, take off the receiver, and pour into it dephlegmed ſpirit of wine, which will cleanſe the volatile ſalt: pour the oyl with the ſpirit and volatile ſalt through a filtring paper made wet firſt and lying in a glaſs funnel, and the ſpirit of wine together with the ſpirit of Harts-horn and the volatile ſalt will run through the paper, and the blackiſh oyl will ſtay behind, but it muſt quickly be poured out, elſe it will paſs through after them. The ſpirit together with the volatile ſalt rectifie through a retort, and the beſt part of the ſpirit will come over together with the ſpirit of wine and volatile ſalt; and when the phlegme is coming, take of the ſpirit, which is come over, that the naughty phlegm may not come amongſt it; keep it well, for it is very volatile, the oyl may be mingled with ſalt of tartar, and rectified by a glaſs retort, and ſo it will be clear; if you will have it fairer, you muſt rectify it with ſpirit of ſalt.

The firſt, which is done with ſalt of Tartar, is of more vertue; it cureth the Quartane, and provoketh ſweat extremly, cureth all internal wounds and pains, which were cauſed by falls, blows, or other wayes: 6, or 8. 10, to 20. drops of it taken in wine and ſweated upon it in the bed. The ſpirit is very good for all obſtructions of the whole body, from ℈ ſs. to ʒ ſs. therefore taken in a fit vehicle, provoketh urine, and forceth down womens courſes, it cleanſeth the blood and maketh ſweat mightily. In the Plague, Pox, Leproſie, Scurvy, *Melancholia Hypochondriaca*, malignant Feavers, and the like where ſweating is neceſſary, it proveth a rare medicine.

To make the ſpirit of mans hair an excellent medicine.

AFter the ſame manner you may make ſpirits out of all kind of of horns and claws of beaſts: but ſince by reaſon of their ill ſmel the uſe of them is not liked of (though in ſeveral heavy diſeaſes, as in the fits of the mother and Epilepſie, they do admirably well:) therefore I will acquieſce. However it is worth obſerving, that the ſpirit made of mans hair is not to be rejected in metallical operations, for it diſſolveth common ſulphur, and reduceth it into a milk, which by further ripening may be turned into blood, the like whereunto no ſpirit is able to do. The ſame ſpirit may alſo of it ſelf, without addition of ſulphur be fixed into a ruby; but that which is ripened with ſulphur is the better; and if it be brought ſo far by the fire, that it have loſt its ſtink, and be made fixed than it will be able ſufficiently to pay for the pains and coals beſtowed upon it.

N. B. Hither belongeth the Proceſs to pour diſſolved metals upon filed hartſhorn, and ſo to diſtil them.

Of the oyl of Ambar.

AMbar yeildeth a very pleaſant oyl and of great vertue eſpecially the white Ambar: the yellow is not ſo good, and the black is inferior to this; for by reaſon of its impurity it cannot be well uſed inwardly; and there cometh over alſo along with it a volatile ſalt and an acid water, which muſt be ſeperated; the water (for ought that I know) is of little vertue; the ſalt if it be ſublimed from the ſalt of Tartar and purified, is a good diuretick, and in the Stone and the Gout, may ſucceſsfully be uſed both inwardly and outwardly. The oyl if it be rectified, eſpecially that which comes over firſt, is an excellent medicine againſt the Plague, Epilepſy, riſing of the Mother and Megrim, 6, 8, 10, to 20. drops being taken thereof at once, and the noſtrils alſo being anoynted therewith for to ſmell to it; and it is to be obſerved, that when it is rectified with ſpirit of ſalt, it proveth much clearer, than done by it ſelf without addition: but if it be rectified with ſalt of tartar, it is of much more vertue, though it fall not ſo clear, as that which is done by ſpirit of ſalt.

N. B. If it be rectified from a ſtrong *Aqua Regia* having before once already been rectified with ſpirit of ſalt, it will turn ſo ſubtle, that it is able to diſſolve iron or copper in ſome ſort, and to reduce them into good medicines; and in this ſecond rectification by *Aqua Regia* all will not come over, but part of it will be coagulated by the coroſive water, ſo that it turneth thick, like unto maſtich, which in the warmth is ſoft, and may be handled with owns fingers like wax, but in the could it is ſo hard, that it may be broken and made into powder, and gliſtereth like gold.

Of the oyl of ſoot.

OF the ſoot, which is taken from Chimneys, where nothing is burnt but wood, there may be diſtilled a ſharp volatile ſalt and a hot oyl. The ſalt is in vertue not unlike unto that which is made of hart-ſhorn or ambar, and it quencheth inflammation, from what cauſe ſo ever it do proceed: The oyl may without rectification externally be uſed very ſucceſſfully for all loathſome ſcabs, and for a ſcald head, *&c.* But if it be rectified, as hath been taught to be done with the oyl of Tartar, of Ambar, and of Hartſhorn; then it may ſafely be uſed inwardly, as the the above written oyls are uſed; for it doth as well as theſe, yea better in ſome ſpecial caſes.

How to make a good oyl out of ſoot without diſtilling.

BOyl the ſoot in common watter, till the water turn blood-red (urin is better than water) and ſet this ſolution (being in an earthen pot) in winter time into the greateſt froſt ſo long till all in the pot be frozen into one peice and turned white: then break the pot and the ice, and in the midſt thereof you will find the hot oyl unfrozen and liquid in colour like blood, which is not much inferior in vertue unto that which is diſtilled, yet afterward it may be rectified, and ſo exalted in its vertue, when you pleaſe, and it is to be noted, that this ſeparation doeth only ſucceed in the greateſt froſt and cold, and not elſe.

Of the ſpirit and oyl of honey,

OF honey there may be made a ſubtle ſpirit and a ſowre vinegar, if it be mingled with twice as much of pure calcined ſand and ſo diſtilled; and it falleth much better yet if it be made with the flores of Antimony, which were taught to be made in the firſt part, whereby the ſpirit is increaſed in its vertue, and its running over hindred thereby; and ſo diſtilling it, there will come over a pleaſant ſpirit, a ſharp vinegar and ſome red oyl alſo, which muſt be ſeperated: the ſpirit after the rectification inwardly uſed is good in all diſeaſes of the lungs. It openeth and inlargeth the Breaſt, ſtrengthneth the Heart, takes away all obſtructions of the Liver and Spleen; it diſſolveth and expelleth the Stone, reſiſteth all putrefaction of the Blood; preſerveth from, and cureth the Plague; all Agues, Dropſies, and many other diſeaſes, daily uſed from ℈ j. to ʒ j. taken with diſtilled water proper for the diſeaſes: the ſower vinegar coloureth hair and nails as yellow as gold: it cureth the itch and ſcabs of the skin; it cleanſeth and healeth old and new wounds, they being bathed and waſhed therewith.

The red oyl is too ſtrong to be uſed of it ſelf, it may be mingled with the ſubtle ſpirit which came over firſt and ſo uſed, and the ſpirit will be exalted thereby in its vertue.

Of

Of the oyl and ſpirit of ſugar.

IN the ſame manner as hath been taught of honey, there is alſo made a ſpirit and oyl of ſugar, *viz.* adding pure ſand to it; or (which is better) of the flores of Antimony, and then according to the rules of Art one ſpoonful after the other of this mixture caſt in, it will yeild a yellow ſpirit, and a little red oyl, which after the diſtillation muſt be digeſted in Balneo ſo long together, till the ſpirit have aſſumed the oyl and be turned thereby very red in colour; it needeth not to be rectified, but may daily be uſed either by it ſelf, or with ſuch vehicles as are proper for your purpoſe; in all it is like in virtue unto that which was made of honey; yet this of ſugar is more pleaſant than the other; it reneweth and reſtoreth all the blood in man, in regard that it received great vertue from the diaphoretical flores of Antimony; and this ſpirit may fitly be uſed in all diſeaſes, it can do no hurt, neither in cold nor hot diſeaſes; it doth help nature mightily, and doth ſo much good, that it is almoſt beyond belief. Eſpecially if for a time it be uſed daily from ℈ j. to ʒ j. The reſidue of it is black, and may be kept for the ſame uſe again, *viz.* for an addition to other honey or ſugar, or elſe you may ſublime it again into flores in the furnace deſcribed in the firſt part, or in the furnace deſcribed in the fourth part of this book, with an addition of iron or tartar, or ſalt nitre, reduces it into a *Regulas*, &c.

To diſtil an excellent ſpirit and a blood red tincture of corals and ſugar.

IF you mix ſugar with red corals made into powder and diſtil it, there will beſides the ſpirit come over a blood-red tincture like a heavy oyl, which is to be joyned with the ſpirit by digeſtion in Balneo, and it will be as vertuous as that which was made with Antimony diaphoreticum. It doth perfectly and laſtingly cure the epilepſie in young and old; it cleanſeth the blood from all filth, ſo that the Leproſie together with its ſeveral ſpecies may be cured thereby, *&c.* Its uſe is the ſame as was taught above of the Antimonized ſpirit of ſugar.

Of the ſpirit of Muſte or new Wine.

TAke ſweet Muſt or juice of grapes, as ſoon as it is ſqueezed out, boyl it to the conſiſtency of honey- and then mix it with ſand, corals, or (which is better) with flores of Antimony, and ſo diſtill it, and it will yield ſuch another ſpirit as that which is made of honey or ſugar, only that this is ſomewhat tarter than that of honey. With honey, ſugar and the juice of grapes, ſeveral metals may be diſſolved in boyling and ſo prepared and made up into divers medicaments, both with and without diſtillation, after the ſame manner as was taught above with tartar: for honey, ſugar, and the juice of grapes, are nothing elſe but a ſweet ſalt, which by fermentation and addition of ſome ſower thing, may be changed into a ſower Tartar, in all like unto that which is gathered in the wine veſſels. There may be made alſo a tartar out of cherries, pears, apples, figs, and all other fruit, yielding a ſweet juice; as alſo of rye, wheat, oats, barley and the like, whereof in the third part more ſhall be ſaid.

For every ſweet liquor of vegetables, if it be turned inſide out, by fermentation may be changed to a natural ſowre tartar; and it is utterly falſe, that (as ſome do ſuppoſe) only wine yields tartar, which by daily uſe made of it by thoſe that have very hungry ſtomachs (like Woolves) indiſtinctly together with the nouriſhment went into the limbs, and there turned to a ſtony matter. If this were true, than in cold Countries, where no wine groweth, men would not be troubled with the Gout or Stone; the Contrary whereof is ſeen daily: though I muſt confeſs, that among all vegetables none yeildeth more than the vine, the concurrent acidity being the cauſe thereof; for it turneth the ſweetneſs into tartar; for the ſowrer the wine is, the more tartar it yieldeth; and ſo much the ſweeter, ſo much the leſs tartar. By this diſcourſe an induſtrious Chymiſt may eaſily come to know the original nature and properties of tartar, and in default of wine, how to make it out of other vegetables; common ſalt or the ſalt of tartar may be diſtilled with honey, ſugar, or ſodden wine (*ſapa*) and it will yield ſuch ſtrong ſpirits, that metals may be diſſolved with them, and they are not to be deſpiſed in Phyſick and Alchymy.

Of oyl Olive.

OIlt of oyls made by expreſſion (as oyl olive, rape oyl, wallnut oyl, hempſeed oyl, linſeed oyl, and the like) there may be diſtilled a penetrating oyl, uſeful both out wardly and inwardly, which is done thus: Take common potters clay not mingled with ſand, frame little bals of it, as big as a pigeons or hens-egg, burn them (but not too ſtrong) to a hard ſtone, ſo that they may attract the oyl; and when they are no more quite red-hot, but pretty hot, then throw them into oyl olive which is the beſt; let them lye in it, till they be quite full and drunk of the oyl, which will be done in two or three hours (ſome caſt them red hot into the oyl, but amiſs, becauſe the oyl contracts thence an *Empyreuma*) then take them out, and caſt in one or two of them at once into your diſtilling-veſſel made red-hot, and let it go; and within a while after caſt in one or two more, and continue this till you have oyl enough. If the veſſel be full of the bals, take them out with the tongs or ladle, that you may proceed without let in your diſtillation, and in this manner you need not fear the breaking of your retort or receiver, or the burning of your oyle. The diſtillation being performed take off your receiver, pour the oyl that came over into a glaſs retort, and rectify it from calcined Allome or Vitriol, and the Allome will keep back the blackneſs and ſtink, and ſo the oyl will come over clear, which muſt be yet rectified once or twice more with freſh calcined Allome, according to the intenſneſs of penetrating which you look for; that which cometh over firſt, ought ſtill to be caught by it ſelf, and you will get a very fair, bright and clear oyl, which is very ſubtle; but that which cometh after is ſomewhat yellow, and not ſo penetrating neither as the firſt; and therefore it is but for external uſe to extract flores and herbs therewith, and to make pretious balſams for cold and moyſt ſores. Alſo you may diſſolve with it Amber, Maſtick, Myrrh, and the like attractive things, and with Wax and Colophony reduce it to a plaſter, which will be very good in venemous ſores and boyls, for to attract the poyſon, and to heal them out of hand. If you diſſolve in it common yellow ſulphur made into powder, you will get a blood red balſom, healing all

manner of ſcabs, and other like defects of the skin; eſpecially when you add to it purified verdegreaſe, and in hot ſores *Saccharum Saturni*, which in a gentle heat and by continual ſtirring about do eaſily melt and mingle therewith. It needeth not to be done in glaſſes, but may be done in an ordinary earthen pot or pipkin.

The uſe of the bleſſed oyl.

THe firſt and clear is of a very penetrating nature: ſome drops thereof given in ſome *Aqua vitæ*, preſently ſtays the collick, proceeding from winds that could not be vented; as alſo the riſing of the mother, the navil being anointed therewith: and a cold humour being faln upon the nervs, whereby they are lamed; if you do but anoint them with this oyl, and rub it in with warm hands, it will quickly reſtore them, and therefore in regard of its preſent help, may well be called *Oleum ſanctum*. If you extract plates of iron or copper with this oyl, it will turn deep red or green, and is a ſoveraign remedy for to warm and dry up all cold and watery ſores. It conſumeth alſo all ſuperfluous moiſture in Wounds and ulcerous Sores, as alſo all other excreſcencies of the skin: it healeth tettars and ſcald-heads, and other like defects proceeding from ſuperfluous cold and moiſture. You may alſo diſſolve in it Euphorbium and other hot gums, and uſe them againſt great froſt, for what limb ſoever is anointed therewith, no froſt how great ſoever can do it any hurt. The balſames made with gum or ſulphur may be alſo diſtilled by a retort, and in ſome caſes they are more uſeful than the undiſtilled balſame.

Of the oyl of Wax.

IN the ſame manner may be diſtilled alſo the oyl of wax, the uſe whereof is in all like unto the former; and for all cold infirmities of the nerves, this is found more effectual yet than the former,

A Spirit good for the Stone.

OUt of ſtones which are found in grapes, there may be diſtilled a ſowre ſpirit, which is a certain and ſpecifical remedy for the ſtone in the kidneys and bladder, and alſo for all pains of the gout. It is not onely to be uſed internally, but alſo externally, wetting clothes in it, and applying them to the places affected, and it will aſſwage and drive away the pains.

Of the ſpirit or acid oyl of Sulphur.

TO reduce ſulphur into a ſowre ſpirit or oyl hath been ſought hitherto by many, but found by few. Moſt of them made it in glaſs-bells, but got very little that way; for the glaſſes being quickly hot, could not hold the oyl, ſo that it went away in a ſmoak. Some thought to get it by diſtilling, others by diſſolving, but none of all theſe would do the feat. Which is the reaſon why now-adayes it is found almoſt no where right, and in the Drugſters and Apothecaries ſhops they uſually ſell oyl of Vitriol inſtead of it, which by far is not to be compared in vertue to the oyl of ſulphur. For this is not onely of a far pleaſanter ſowre taſte, but in efficacy alſo much exceeds the other. And therefore being of ſo great uſe both in Phyſick and Alchymy, as in all hot diſeaſes, mingling the patients drink therewith, till it get a pleaſant ſowre taſt, for to quench the intolerable drowth, to ſtrengthen the ſtomach, to refreſh the lungs and the liver: Alſo externally for to cure the gangreen: Alſo for to Chryſtalliſe ſome metals thereby, and to reduce them into pleaſant vitriols, uſeful as well in Alchymy as Phyſick: I thought good to ſet down the preparation, though it be not done in this our diſtilling furnace, but in another way by kindling and burning it as followeth.

Make a little furnace with a grate, upon which a ſtrong crucible muſt be faſtned reſting on two iron bars, and it is to be ordered ſo that the ſmoak be conveighed (not above by the crucible, but) through a pipe at the ſide of the furnace: the crucible muſt be filled with ſulphur even to the top; and by a coal-fire without flame be brought to burn and kept burning. Over the burning ſulphur, a veſſel is to be applyed of good ſtony earth like unto a flat diſh with an high brim, wherein is alwayes cold water to be kept, and whereunto the burning ſulphur doth flame: which thus burning, its fatneſs conſumeth, and the acid ſalt is freed and ſublimed to the cold veſſel, where it is diſſolved by the air, and in the form of a ſharp oyl runs from the hollow veſſel into the receiver, which muſt be taken off ſometime, and more ſulphur ſupplyed inſtead of that which hath been conſumed, to the end that the ſulphur may ſtill burn in the crucible: and beat with the flame to the cold head: and within few dayes you will get a great quantity of oyl, which elſe by the (*campana*) glaſs-bell in many weeks could not have been done.

N. B. Such a ſowre ſpirit or oyl may alſo be got by diſtillation together with the flores, *viz.* thus: If you take pieces of ſulphur as big as hens eggs, and caſt them one after another into the hot diſtilling veſſel, a ſowre oyl together with flores, will come over into the receiver, which muſt with water be ſeparated out of the flores, and the water abſtracted from it again in a cucurbit, and in the bottome of your glaſs body you will find the oyl, which in vertue and taſte is equal to the former, but you get nothing near ſo much in quantity by this way, and if you do not look for the oyl, you may leave it with the flores, which by reaſon of their pleaſant acid taſte are much toothſomer to take than the ordinary ones.

To the Courteous Reader.

THus I conclude this ſecond part; I could have ſet down more medicinal proceſſes in this Treatiſe: but having as many as will be a ſufficient guide for the diſtilling of other things alſo, I thought it good here to acquieſce; and whatſoever hath been here omitted, ſhall be ſupplyed in the following parts.

FINIS.

THE

Fig: II

Fig: III

Place this, Part I. Before *Page* 55.

Fig: I

Fig: II

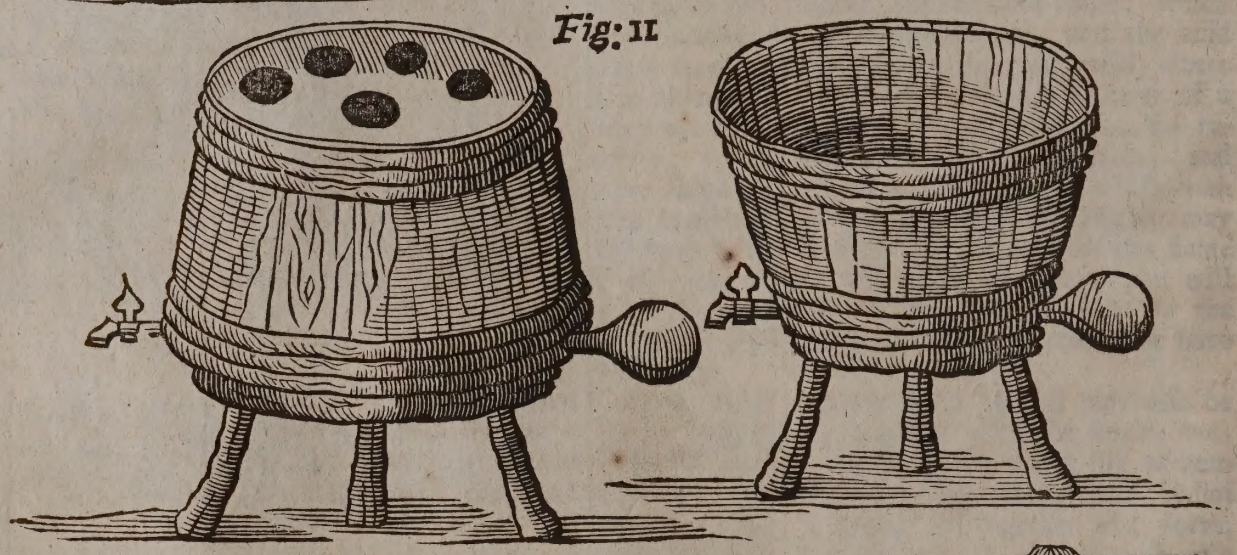


Fig: III

THE

THIRD PART

OF

Philosophical Furnaces:

In which is described the Nature of the Third Furnace; by the help whereof, and that without Stills, and Caldrons, and other Copper, Iron, Tin, and Leaden Instruments, various Vegetable burning Spirits, Extracts, Oyls, Salts, &c. by the help of a certain little Copper Instrument, and Wooden Vessels are made for Chymical and Medicinal Uses.

A Preface of the Copper Instrument and Furnace.

NOW this Instrument is made of strong Copper plates after the following manner. You must make two strong hemispheares of Copper or Latten of the bigness of a mans head (or thereabout) and join them together with a most strong soder, and that without tin, whereof the one must have a pipe: Now the pipe must be of a most exact roundness, that it may most accurately fit the hole that is made with an auger or wimble to keep the water from flowing out like to a tap, of the length of one span at least, wider on the hinder part towards the globe, than on the forepart, which also must be according to the bigness of the globe, greater or lesser, and be exactly joined with the best soder to its hemisphear, and the diameter of the forepart being very round like a tap, and most exactly filling the round hole must be of two fingers breath. Now there is required to the foresaid instrument or globe, a certain peculiar little furnace made of iron or copper, viz. most strong copper plates, covered within with stones or the best lute, into which is put that globe like a retort, so that it may ly upon two iron bars of the distance of a span, or span and half from the grate; the neck whereof (that pipe) goeth forth of the furnace one span at least. The furnace also must have below a place for the ashes, and above a cover with its hole for the letting forth of the smoke, and for regulating the fire, as you may see by the annexed figure. It must also below have a treefoot, on which the furnace must be set, and on the sides two handles by the help whereof it may be removed from place to place; the which is very necessary; for it is not only used for the distilling of burning spirits by wooden Vessels instead of coppor, but also for such distillation, and digestion that is performed in gourds, bolt-heads, and other instruments of glass, stone, copper, tin, &c. which are to be set in Balneo: also in the boyling of beer, metheglin, wine, and other drinks, which are to be performed by the help of wooden Vessels.

Of Wooden Instruments that are to be used instead of Stills, Baths, and Cauldrons.

In the first Figure, A represents the Furnace with a Copper Globe. *B.* The Copper Globe. *C.* The distilling Vessel. *D.* The Refrigeratory with a Worm. *E.* The Receiver. *F.* Stools on which the Vessels stand. *The Second, A* Balneum with a Cover having Holes in it for the Glasses, set upon a Tree-foot. *The Third,* A Wooden Vessel for the making of Beer. *The Fourth,* A Tub for a moist Bath, which is to be warmed by the Copper Globe. *The Fifth,* A wooden Box for a dry Bath to provoke sweat with Volatile Spirits.

IN the first place I shall speak of wooden Vessels that are to be used instead of Copper stills, in the distilling of burning spirits out of wine, beer, lees, malt, wheat, meal, roots, hearbs, flowers, seeds, and other vegetables, as also oyls of vegetables.

See that thou hast an oken barrel, like to those wherein wine and beer are kept, of a just bigness, *viz.* answerable to the bigness of the globe, as is sufficient for the coction: for a barrel that is too big will make the coction slow, and tedious. A greater globe may be fitted to a lesser barrel, but not on the contrary, a great barrel to a little globe: For by how much the bigger the globe is, and the less the barrel, so much the sooner is the work hastned. Now seeing that this Art was invented for the saving of costs, which otherwise would have been expended in providing of stils, cauldrons, furnaces, *&c.* it is best not to have too great a globe, which requires a greater furnace, and

is more hardly to be carryed, becauſe it is to be covered within with lute, or a wall; for it is ſufficient if it be big enough for the coction. Wherefore I will give you a juſt and due proportion of both, *viz.* of the globe, and veſſel, which in diſtillations and other operations, the curteous reader may imitate.

A globe of the bigneſs of a mans head, containing three or four cannes, whereof each containeth four pints, is ſufficient for the heating of a barrel of 30, 40, 50, 60. and 100 gallons, which by how much the more remote from 100 and nearer to 30, ſo much the ſooner is it heated, and the coction furthered; and on the contrary, by how much the nearer it is to 100 and more remote from 30, ſo mueh the ſlower is the coction. I do not therefore adviſe that a huge barrel be choſen for a ſmall globe, by reaſon of a long and tedious operation: And if all and every thing be not ſo accurately obſerved to a hair, yet it matters not much, becauſe it ſufficeth to do the ſame thing by the help of one ſmall copper inſtrument of divers forms. For in this way of diſtilling, wooden veſſels that are requiſite to the diſtilling of ſpirits, and boyling of Bear, and for baths are more eaſily provided, then ſo many copper veſſels in the common way. For by this means not only coſts are ſpared, but alſo it is in ſtead of building of furnaces, becauſe when any barrel hath been uſed, you may remove it, and ſet another in the place of it for another operation, the which cannot be done with ſtills and cauldrons faſtened into a furnace. And this invention is for thoſe that want Artificers, as Copperſmiths, *&c.* becauſe wooden inſtruments are more eaſily provided: alſo by the help of this globe may moſt ſecret operations be performed.

For the furnace with the copper globe may be built in one place, and in another place the *Balneum*, *viz.* the places divided with a wall, ſo that he that looks to the fire may not know what is done in the Elaboratory; for oftentimes the care of the fire is committed to heedleſs ſervants, that break glaſs inſtruments by their careleſſeneſs, by which means oftentimes a moſt pretious medicine is loſt; which danger this invention is without.

Wherefore this copper globe with its wooden veſſels is more convenient then thoſe copper ſtills and cauldrons. But this I would have thee know that this new invented diſtillation is ſlower, then the common way which is performed by ſtills, and conſequently requires a long fire. I deſire therefore the rich that dwell in large and ſpacious houſes, that they would uſe the old way of diſtilling; but the poor, who have but little houſhold conveniences, and the covetous, that they would uſe this little copper globe with its wooden veſſels: for although there be a longer fire required, yet theſe are not to be compared to thoſe coſts which are otherwiſe expended upon ſo many copper veſſels of ſo many divers forms. Let him therefore keep to his copper veſſels, who cannot underſtand me, for it concernes not me. Without doubt there are ſome whom this my new invented way of diſtilling will pleaſe, before other, being communicated for the ſake of the poor labouring houſe-keepers, that cannot boyl Beer, and diſtill burning ſpirits for lack of veſſels: for a globe of five or four pound is more eaſily provided, then other copper veſſels of 60, 80, 100 pound: alſo thoſe wooden veſſels are more eaſily provided then furnaces, which ſome for want of place only cannot build. Chooſe therefore which way thou wilt, for theſe things which I have wrote, I have wrote for the poors ſake rather than for the rich. Certainly rich men that have ſpacious Elaboratories need not to be aſhamed to follow this way, for it is free for every man to go a ſhorter way, unleſs they had rather prefer the old way before a new and compendious, whom I cannot help, being contented with a publication which is made for the ſake of my neighbour, whether it be taken well or ill, with a good minde, certainly knowing that more profit then diſprofit may be obtained by the help thereof. It ſhall not therefore repent him of his labor, who knows rightly to prepare and uſe this copper, and wooden veſſels.

There follows now the preparation of the veſſel.

THE veſſel being made is to be placed with one bottom, upon a ſtool that is fitted for it, which being done, make a hole with a wimble neer the bottom, for the receiving of the neck of the copper globe, which is to be covered over with a linnen cloth: make alſo about the lower bottom another hole for a tap, by the help whereof the remainder of the diſtillation is drawn forth: alſo you muſt make a large hole in the upper bottom, the diameter whereof muſt be one ſpan for to pour in the water to be diſtilled, with a funnel. Alſo there muſt be made a hole near the upper bottom of two or three fingers breadth, into which is to be put a copper pipe of a ſpan long, which is to be faſtened cloſely therein; and to this pipe another oaken veſſel with a copper worm and cold water like to other refrigeratories, muſt be applyed. Alſo the joints of the aforeſaid ſhort pipe, *viz.* of the firſt barrel, and of the ſecond barrel, *viz.* the refrigeratory muſt be ſtraightly, and cloſely united together, which afterward may be the better joyned together with a fit lute for the diſtilling. And this is the form and faſhion of the wooden veſſel, that is to be uſed in the place of copper veſſels, in the diſtilling of burning ſpirits and oyls. But thou wilt object that theſe kind of wooden veſſels are porous, and drink up great part of the ſpirit and oyls.

I anſwer; none of the ſpirits ſeeketh a violent paſſage out, in caſe the ways be open There is no danger therefore, when there is paſſage enough given them by a pipe that is wide enough. Neither doth oyl ſtick to them in diſtillation, for whatſoever is by force of the boyling water to be ſeparated from the ſpices, and ſeeds that alſo is ſublimable by the force of the ſeething water, ſo as to diſtill in, ſo that in the refrigeratory no more is loſt than in the ſtills. Diſtillation being made, the aforeſaid ſpirits may be rectified in theſe wooden veſſels, (being firſt waſhed) as well as in copper ſtills.

The making of a wooden veſſel for a Balneum, which is to be uſed in ſtead of copper and leaden Cauldrons for digeſtion, and diſtillation by glaſs veſſels.

MAke an oaken veſſel as big or as little as you pleaſe, according to the greatneſs, or littleneſs, multitude, or fewneſs of the veſſels, of two or three ſpans high, a little narrower above then below, and ſo faſhioned above, that a cover of wood, copper, or lead, may moſt cloſely be joyned to it: the cover muſt have holes greater or leſſer, according

ing to the glaſſes, as is wont to be in the making of a *Balneum*, as you may ſee by the the annexed figure. This veſſel alſo muſt be placed upon a ſtool of the height of an ell, or ſuch height as is required for the joyning of the copper globe with the *Balneum*, which muſt have a hole near the lower bottom, for the receiving of the neck of the aforeſaid globe. In defect of ſuch a veſſel, which yet you may provide eaſily enough, take a wine or bear veſſel divided in the middle, and make a hole near the bottom for the neck of the globe, make alſo a wooden cover with holes, &c. He that will be curious may provide all things according to the beſt Art.

A wooden veſſel ſerving for boyling of bear, metheglin, vinegar, &c. as well as copper, iron, and tin veſſels.

MAke a wooden veſſel, which ſhall be more high than broad, a little wider above than below, as you pleaſe: or take a wine or bear barrel divided in the middle, and near the bottom make a hole for the neck of the globe, which is to be covered with boards, which ſerves as well for the boyling of bear, *&c.* as thoſe of copper.

A wooden veſſel for a bath for ſweet, or mineral water, which may be according as you pleaſe, kept warm, for the preſerving of health.

MAke a long wooden tub convenient to ſit in, which is to be ſet upon a ſtool of a juſt height, *viz.* that the bottom of the veſſel may anſwer the neck of the globe which is put into the furnace: you may alſo have a cover, that may cover the whole tub, which may be divided and united in that place where the head goes forth, as appears by the annexed figure, or you may cover it with a cloth, laying it upon ſmall crooked ſticks faſtned to the tub, yet ſo that the head may have its liberty, eſpecially in a vaporous bath of common ſweet, or medicinal water; or make a high wooden cover ſhutting very cloſe, for a dry ſweat, where it is no matter whether the head be ſhut in or no.

Of the uſe of wooden veſſels in diſtilling, boyling, bathing, &c. And firſt of the diſtilling veſſel.

HE that will diſtill any burning ſpirit by help of the diſtilling veſſel, out of wine, metheglin, bear, barley, wheat, meal, apples, pears, cherries, figs, *&c.* alſo out of flowers, ſeeds, and other vegetables, hath need ſo to prepare his materials, that they may yield their ſpirit. Where I thought it convenient, and indeed neceſſary to ſay ſomething of the preparation of each vegetable, for better information ſake, or elſe a profitable diſtillation is not to be expected, but labour in vain to be feared.

And firſt of the preparation of the lees of wine, bear, hydromel, and other drinks.

THe lees of wine, bear, hydromel, *&c.* have no need to be prepared, becauſe they do eaſily enough of themſelves yield their ſpirit, unleſs haply having loſt all their humidity they be dryed, which you may make moiſt again by the admixion of common water, leſt they be burnt in diſtilling & ſtick to the veſſel; of which thing more in the diſtillation it ſelf. Now flowers, roots, hearbs, ſeeds, fruits, apples, pears, cannot be diſtilled without a foregoing preparation. You muſt therefore firſt prepare them, as followeth.

Of the preparation of all kind of corn, as Wheat, Oats, Barly, &c. which muſt go before the diſtilling of the ſpirit.

AND firſt of all a malt muſt be made of the corn, as it is wont to be in the making of bear. Now the manner of making of malt is known almoſt to all, wherefore I need not ſpeak much of that, becauſe in all places that have no wine, there is ſcarce any houſe found in which Malt and Bear is not made, as well in the country as cities. But however, there is a great deal of difference of making of it, for a long knife doth not make a good Cook, nor all drinkers of wine are good planters. For many have perſwaded themſelves, that, if they follow the footſteps of their fathers, they have done well (although they have been in an errour) and being ſcornful, refuſe inſtruction. Wherefore ſomething is to be ſaid of the difference of malting. Although I never exerciſed the Art of making Beer, yet I am certain I do in that excel all other Diſtillers, and Brewers. For I often ſaw, and indeed with admiration, the ſimplicity of many in their operations, although common, and dayly, to whom though an age ſhould be granted, yet they would never be more thrifty, being content with their ancient cuſtomes. Good God! How perverſe is the world, where no body labours to find out any good, neither is there any one that thinks of perfecting, and amending things already found out: Where all things run to ruin, and all manner of vice increaſe: for now almoſt every one ſeeks only after riches *by right or wrong*; for it is all one with them, if they have them, not thinking that things ill gotten ſhall periſh, and that the third heir ſhall not injoy them, and that unjuſt riches ſhall devour thoſe that have been honeſtly gotten, with danger alſo of eternal damnation. I pray you, if our Anceſtors had been ſo negligent, and had left nothing to us: I pray you, I ſay, what Arts and Sciences ſhould we have had now? It is come to this paſs now, that vertues decreaſe, and vices increaſe.

Of the difference of malting.

THe difference of malt, by reaſon whereof it yields better or worſe beer, and ſpirit, conſiſts for the moſt part in the preparation thereof: for being made after the vulgar way it retains its taſt, wherefore it cannot yield good ſpirit, nor good beer, which is obſerved of very few, wherefore they could not draw forth good ſpirit out of corn, but ſuch as ſavours of the taſt and ſmell of the malt. Which is not the fault of the corn, but of the artificer not operating aright in the preparation of his malt, in diſtilling and rectifying. For if it were prepared a right in all things, corn yields a very good ſpirit, not unlike to that which is made out of the lees of wine, in taſt, odour, and other vertues. Which Art, although it be not known to all, yet it doth not follow that it is impoſſible: Now I did not ſay that it is that common way, whereby that ſpirit, which is like to the ſpirit of wine, is diſtilled, but another which is more ſubtil, and witty. Out of all vegetables is drawn a burning ſpirit, yet ſuch as is perceived by ſome difference of the taſt,

aud odour, but that is not the ſpirits faults, but of the vegetable, as of hearbs, ſeeds, corn, *&c.* communicating their vertues, taſt, and odour to the ſpirit: whence that ſpirit deſerves to be called not ſimple, but compounded, for elſe all the burning ſpirit (being rightly rectified from its flegm) is made out of any thing, having the ſame vertues with the ſpirit of wine, although it ſeem improbable to ſome. I do not deny that one ſimple may yield more or leſs ſweet ſpirit than another. For ſweeter wines yields ſweeter ſpirits: Alſo clear wine yields a ſweeter ſpirit than the lees of wine, although they come forth out of one and the ſame veſſel: For clariſied wine, and that which is ſeparated from the fæces yields a ſweeter ſpirit than the Lees, and impure and heterogeneal ſediment, which corrupts the ſimple, and ſweet ſpirit, with a ſtrong taſt and ſmell: ſo that that may deſervedly, being as it were ſimple, be preferred before this which is accidentally corrupted. And this is to be underſtood of all other ſpirits. What hath hitherto been ſaid, hath been ſpoken for the ſakes of them, who have perſwaded themſelves that they could not perform chymical operations ſo well by the ſpirit of corn, as with the ſpirit of wine, for I never found any difference of them in the extraction of minerals or vegetables. Let him therefore that can, receive my opinion, and experience, ſeeing I will have nothing to do with contradicting Carpers: Without hurt to others I dare not reveal the Art of diſtilling a ſweet ſpirit with great profit out of corn, in all things like to that which is made of the fæces of wine, *viz.* without the preparation or grinding of the malt, which ſhall haply be [* *See Explicat. Mirac. Mundi*] communicated elſewhere at ſome time or other. For this Book is not written for the publiſhing of ſecrets, but of a new invented diſtillation. But thou that wilt make a ſweet burning ſpirit out of malt or honey; know this, that the corn muſt be brought after a certain peculiar manner into malt, and loſe its ungrateful ſavour before its diſtilling, and fermentiug, or elſe after the wonted manner a certain ungrateful ſpirit will be drawn from thence, that cannot be compared to the ſpirit of wine. The whole Art thereof conſiſts in a true preparation; for ungrateful things are by Art brought into gratefulneſs, and on the contrary grateful things are made ungrateful by negligence. And thus much for information ſake.

Of the fermentation of Malt.

TAke of Malt ground in a Mill as much as you pleaſe, upon which in a wooden veſſel ſet up right, pour cold water, as much as will moyſten it, and ſerve for mixtion and comminution; then alſo pour as much warm water as will ſuffice for the making the mixture moiſt and thin, and alſo warm; for it muſt be neither hot nor cold: which being done mix with it ſome new barm, and cover it with a cloth, and in a ſhort ſpace, being expoſed to heat, it will begin to ferment (wherefore the veſſel is not to befilled to the top) and leave it ſo long in fermentation, until the mixture deſcends, which for the moſt part is wont to be done the third day, and the malt will be ready for diſtillation.

Of the fermentation of Honey.

NEither hath honey any need of a ſingular Art in its fermentation, becauſe being mixed with 6, 7, 8, or 10. parts of warm water, it is diſſolved, and unto the ſolution is added ferment, as has been ſpoken concerning malt, which afterward is left covered in ſome heat for to be fermented, being fit for diſtillation when it becomes to wax hot. Now know that too great a quantity of honey makes a very ſlow fermentation, *viz.* of ſome weeks and months; wherefore for acceleration ſake, I adviſe that a greater quantity of water be added; although otherwiſe it yields plenty of ſpirits, but ungrateful, which therefore I adviſe no body to diſtil as being unprofitable, unleſs any one know how to take away the * ungratefulneſs thereof. [* *See the Conſolat. of Navigators.*]

Of the preparation of Fruits, Seeds, Flowers, Herbs, Roots, &c.

THe fruits of trees, as Cherries, Plumbs, Apples, Pears, Figs, Juniper-berries, Elder-berries, Dwarf-elder, and Mulberries, *&c.* are bruiſed in wooden veſſels, with wooden peſtils; and upon them being bruiſed, is poured warm water, and ferment added to quicken it, as hath been above ſaid of malt. Seeds are broken in a mill; flowers, hearbs and roots, are cut ſmall, and are ſtirred up to fermentation by mixing of warm water, and barm or yeſt.

An Annotation.

BEfore thou diſtil the aforeſaid vegetables prepared by the help of fermentation, diligently weigh, and accurately obſerve whether the mixture be ſufficiently fermented, for ſometimes there is too much cold, or hot water put to it; ſometimes the veſſel is not well covered, by which means the cold air is let in, whence the fermentation is hindred, and conquently the diſtillation of the ſpirit: For by the help of fermentation the burning ſpirit of the vegetables is ſet at liberty, without which it cannot be done; alſo the diſtillation is hindred by too much haſt, as well as by too much delay; for if you begin to diſtill before the time, *viz.* fermentation not being yet perfected, thou ſhalt have but few ſpirits; wherefore alſo the better part is, by many that are unskilful, caſt to the ſwine, but without any great loſs, if the matter were malt, becauſe that ſwine are fed therewith; but not ſo if other vegetables were the matter of the diſtillation. Alſo too much flowneſs where the matter begins to be ſowre before it be diſtilled, yields very few ſpirits, that which often happens, whilſt hearbs, and flowers, *&c.* are out of ignorance left in fermentation 3, 4, 5. and more weeks, before they be diſtilled, for the greateſt part of the ſpirit is then turned to vinegar, which would not be ſo very ill done, if ſo be theſe men knew how to clariſie the remainders, and turn it into vinegar, that nothing thereof might be loſt; for the vinegars of hearbs, flowers, ſeeds, and roots are not to be contemned. And ſo often times (a thing to be lamented) the better part, if they be ſpices, and pretious things, is loſt.

The matter of the diſtillation, and other choice things, as ſeeds and hearbs are caſt away with loſs; wherefore for admonition ſake I was willing to add

Of ſuch

ſuch things that the operators may have an opportunity to conſider the matter a little more profoundly with themſelves, or at leaſt of learning the art of diſtilling from countrymen, who do not ſuffer their malt to putrefy, grow ſower or mouldy, before they fall upon their diſtillations, but preſently fermentation being made (the third or the fourth day) begin their diſtillation.

But ſome one will object, that my vegetable ſpirits are not pure by reaſon of the ferment that is mixed, having in it ſelf a ſpirit. I anſwer, there is not ſo great a portion of the ferment mixed which can corrupt the vegetable ſpirit. For although ſome ſpoonfuls of ferment yielding but a few drops of ſpirits be added to a great quantity of the vegetables; yet there can come no hurt or detriment to ſo many quarts of the vegetable ſpirit. I have ſeen ſome ſupercilious men that would not add ferment to the matter of their ſpirit, but ſugar or honey, by which they would promote fermentation, and ſo have thought to get a pure ſpirit, not conſidering that honey and ſugar, after fermentation are made to yield their ſpirit alſo, whereof one ſpoonful yields more than ten or twenty of Barm: But hony and ſugar fermenting not without difficulty themſelves, how can they promote the fermentation of other things? Who alſo have had experience, that the addition of their ferment hath been ſuperfluous, whilſt their flowers and hearbs have ſtood ſome weeks in maceration, before they begun to ferment, and that often times they have contracted an acidity, muſtineſs and ſtink, the reaſon of which was an unſutable ferment. There are indeed the fruits of ſome trees that have a ſweet and full juice, as grapes, cherries, apples, pears, figs, *&c.* which need not the addition of any ferment, having a natural ferment of their own, but other vegetables not ſo, being lean, as hearbs, flowers and roots. It is neceſſary there to promote the fermentation of them by the addition of a ſutable ferment, leſt in length of time theſe hearbs and ſeeds loſe their ſpirit exhaling in maceration. And thus much I was willing to ſay for information ſake, and indeed for the ſake of them who ſeek after the beſt and choiceſt medicines, wanting a good burning ſpirit as a companion applicable to them. For this ſpirit came not only by it ſelf, as *Aqua vitæ*, into a medicinal uſe as well internal as external, eſpecially that which is prepared of cordial, and cephalick hearbs; but alſo being united with the proper oyls of thoſe hearbs in many deſperate diſeaſes, where it could put forth its vertues eminently.

And thus much ſufficeth concerning the preparation of vegetables that goes before the diſtillation of burning ſpirits.

The manner of diſtilling in general followeth.

HE that is going to diſtil, hath need to ſtir his fermented matter very well with a ſtick, that the thicker parts may be well mixed with the thinner, and then he muſt fill therewith his diſtilling veſſel ſet upon a treefoot, and joyned to the copper globe in the furnace on one ſide, and to the refrigeratory on the other, the joints in all places being well cloſed either with Oxe-bladders, or with ſtarch and paper. Alſo the interiour part of the globe in the diſtilling veſſel muſt be fenced with a copper or wooden basket, that the herbs, ſeeds, and other things enter not into the globe, into which only water muſt come. Alſo the upper hole muſt be cloſe ſtopped with a fitting ſtopple wrapt about with linnen clouts, (*viz.* that hole by which the matter to be diſtilled is put in) like to veſſels of wine that are ſtopped. Which being well done, you muſt kindle the fire in the furnace under the globe, until all the matter in the whole veſſel boyl well, and that burning ſpirit riſe, and go out, through the refrigeratory (where it is condenſed) into the glaſs receiver that is ſet under it, no leſs than that diſtilled out of a ſtill; and you muſt continue the fire till all the ſpirit be come forth, which you may know by the taſte. Which being done, and all things being cold, let the remainders be taken out by the lower large tap-hole, for meat for ſwine, or other uſes. The ſpirit that is drawn off may be exalted, and rectified at your pleaſure in the ſame veſſel, being firſt made clean together with the refrigeratory. Note well, that ſometimes there is left a fat oyl with the flegm in rectifying of the ſpirit, proceeding from that hearb of which that was the ſpirit, which did diſtil off with the ſpirit from the matter with a ſtrong fire in the firſt diſtillation, but in the rectifying could not aſcend with the ſpirit in a gentle fire, but is conſtrained to remain with the inſipid flegm. And this oyl alſo hath its vertues, eſpecially that which is rectified by a glaſs gourd in Balneo, with the ſpirit of ſalt, and clarified. Now the like oyl is got almoſt from all hearbs, roots, ſeeds, flowers, and fruits, but out of one ſubject more than another, according to the hot and cold temper thereof. Eſpecially the ſediment of wines yields a good quantity of ſuch oyl, which being rectified is a medicinal true oyl of wine, but not before endued with a ſweet ſavour, and it is an excellent cordial, although I know no body that knew this before.

And thus I have ſhewed the general way of diſtilling, burning ſpirits, by help of the aforeſaid wooden diſtillatory. Now alſo follows,

The manner of diſtilling Spices, Seeds, Flowers, Hearbs, Roots, Woods, &c.

FIrſt, the ſeeds muſt be broken in a mill, flowers, hearbs, and roots cut ſmall, the woods broken or raſped, upon which afterwards a good quantity of water (in which they may ſwim) muſt be poured for the maceration of them, ſo that when the diſtillation is ended there may remain ſome water, leſt for want of water they be burnt in the diſtilling, and yield an oyl ſavouring of an *empyreuma*, and not ſweet. Neither is too great a quantity to be poured upon them, but as much as ſhall ſerve to prevent the burning of the aforeſaid vegetables in the diſtilling of the oyl thereof. And indeed freſh vegetables may preſently without any foregoing maceration, being put with their proper waters into the diſtilling veſſel be diſtilled. But they that be dry may for the ſpace of ſome dayes be macerated before they be diſtilled. Alſo the water appointed for maceration muſt be ſalted, for the better mollifing, and opening the aforeſaid materials, that they may ſooner yield their oyl. Now green and freſh need not any ſalt water, yet it will not be hurtful to mix ſome therewith, becauſe ſalt helps the boyling water, ſo as to make the oyl more eaſily to aſcend. It alſo helps and furthers diſtillation as doth Tartar and Allome, if they be rightly mixed and ordered. Which being all rightly done, the materials that are macerated muſt be put by a

funnel into the diſtilling veſſel, and fire muſt be given as hath been ſpoken concerning the burning ſpirit, and the oyl of the ſeed, or wood macerated in the water will come forth in the diſtillation together with the water. And although by this way more oyl comes forth, *viz.* Maceration being made by the addition of ſalt, than without ſalt, by the help of the ſweet water alone, as is the faſhion in all places almoſt to diſtill oyls of ſpices; yet much remaines inſeparable by the water, and conſequently not to be ſublimed with the water. Therefore the better way is that which I ſhewed in the firſt part to be performed with the ſpirit of ſalt, which if you pleaſe you may follow. All the oyl being come forth (which is perceived by the changing of the receivers) the fire is to be extinguiſhed, and the remainder is to be taken out, which if it be of ſeeds, hearbs, or fruits, may, being yet warm, be fermented by the addition of ferment for the diſtilling of the ſpirit, of which there cannot be ſo great a quantity by reaſon of taking away of the oyl, as otherwiſe is drawn out of things that have not loſt their oyl: For all burning ſpirit partakes of much oyl, of the eſſence, and nature whereof more a little after. Now ſpirits muſt be made without the addition of any ſalt, for ſalt hinders the fermentation, without which the burning ſpirit cannot be had. But the water that is diſtilled together with the oyl, is to be ſet in a certain temperate place, until the oyl aſcend, and ſwim upon the water, from whence it is to be ſeparated with a Tunnel (of which in the fifth part,) alſo there are ſome oyls which do not aſcend, but fall to the bottom, which are alſo to be ſeparated with a Tunnel, and kept for their uſes. Now how theſe oyls may be kept clear long, and not contract any clammineſs, ſhall be taught in the fifth part: but how they may after they have loſt their clearneſs by long ſtanding, and are become tenacious, be reſtored and clarified again, is taught in the firſt part, wherefore I need not here repeat it.

How Oyls are to be coagulated into Balſames.

IT hath been the cuſtom a long time to turn aromatical oyls into Balſams, where always one hath been willing to excel another in this Art, which nevertheleſs was nothing hitherto, but for a waſhing and cleanſing; for they could not be uſed inwardly, but only outwardly for their odour to comfort the heart and brain. Now the aforeſaid oyls are coagulated many ways, and are made portable in Tin, Silver, and ivory boxes.

Some have mixed the fat of a lamb with them by help of heat, and have turned them into a liniment, which they have coloured with divers colours; as for example, they have corrupted the oyls of green hearbs; as roſemary, marjoram, lavender, rue, ſage, with a green colour, by the admixtion of verdigreaſe (which is noxious to the head and heart) where one corroborates and refreſheth, another deſtroys. They have tinged the Balſam of Cinnamon, and *lignum Rhodium* with a red colour by the help of a poyſonous Cinnabar. Others that are more induſtrious, have tinged their Oyls with extracted colours of vegetables, which balſams are more ſafely taken inward: But they are not durable, acquiring a ſlimineſs and ſtink; wherefore they have mixed white wax to coagulate them: By which means they are become more durable without ſtinking; but yet in length of time ſo tenacious, that being ſmeared or rubbed upon the skin, they ſtick faſt by reaſon of the wax that is mixed with them: at laſt others have found out a better way of coagulating aromatical oyls, and other things, *viz.* by the addition of the oyl of Nutmeg made by expreſſion, having loſt its odour and colour by ſpirit of wine; which they called the *Mother of Balſames* And this way hath been a long time concealed by Apothecaries as a great ſecret, until at length it is become common, ſo that balſames prepared after this manner are ſold almoſt in all ſhops: But although that be the beſt way, yet they are not durable balſames that are made that way, becauſe they lack ſalt. I do not contemn and diſapprove of Balſames made after this way, for if a better way had been known, better had been made, for no man is obliged beyond his power. Wherefore they are not only to be excuſed, that have uſed Lambs fat, Wax, and the oyl of Nutmegs in the making of their Balſames, but alſo to be honoured for their communication. Now ſeeing the aforeſaid Balſames cannot be taken inwardly, nor be ſo well outwardly adminiſtred by reaſon of their unctuoſity, others have conſulted to congeal the Oyls by the admixtion of their own proper fix-ſalts: And Balſames prepared after this manner are made free from clammineſs, or tenaciouſneſs, and may be diſſolved in wine, beer, or any liquor.

Wherefore they may be not only conveniently taken inward, but alſo more fitly than thoſe old, be rubed outwardly for the odours ſake, becauſe they are eaſily waſhed off again with water. They do not only give a moſt ſweet odour being rubbed, but alſo by reaſon of the admixtion of the fixed ſalt, having the nature of ſalt of Tartar, do beautify the skin. Wherefore they are to be commended, being diſſolved in fair warm water for a lotion for the head, and face; not only becauſe they beautify, but corroborate with their excellent odour; which thoſe fat Balſames cannot do. Wherefore this way is to be preferred far before the other.

Let him therefore that will, receive what I have ſaid, for *rare and new things are not alwayes accepted*, eſpecially *being obſcure:* but I hope for the approbation of the age to come.

The manner of preparing follows.

TAke the remains of the burning ſpirit, and being put into a ſack, preſs it hard: reduce the water preſſed out into vinegar, and of roſes thou ſhalt have a roſe vinegar, and of other things another, being the beſt in a Family for to ſeaſon meats: then take the remains out of the ſack, and reduce it to white aſhes in a potters furnace, upon which pour the flegm of its own burning ſpirit (being ſeparated) to extract the ſalt, from which evaporate again all the humidity in a glazed earthen pot: calcine the coagulated ſalt gently in a clean crucible, and it will be white and be like to ſalt of tartar in taſt; from which abſtract, ſometimes its own proper burning ſpirit, calcining the ſalt firſt every time; and the ſpirit will be ſo exalted by its proper ſalt, that it will preſently aſſume its proper oyl, and will, being poured upon it, aſſociate it to it ſelf ſo as to be perceived no more in the ſpirit, which will remain very clear: Which being done, calcine the ſalt yet once

once more very well in a crucible, and diſſolve ſo much of it in its proper flegm, as ſufficeth for the coagulation of the oyl, then mix this ſolution with the burning ſpirit, mixed with its oyl, and ſet it in a vial of a long neck well ſtopt, in Balneo, that the ſpirit may not exhale, in the coction of it, and in the ſpace of a few hours there will be an union of the mixture which will be as white as milk. Which being done, let the glaſs cool, for there is a conjunction of the ſpirit, oyl, and ſalt, ſo that neither can be diſcerned from another, which is to be poured into a veſſel of a wide mouth, and it will be congealed in the cold like a white ointment, not only to be anointed withal, but alſo to be diſſolved in any liquor, being of an excellent odour, which may alſo be given inwardly very conveniently, and being uſed outwardly it makes the skin beautiful and ſweet; wherefore this is that moſt deſired balſame of Princes and Ladies. And by this way the three principles of vegetables, being ſeparated, and purified, are again reunited, in which union there is found the whole vertue, taſt, and odour of the vegetable.

Note well, That he that will colour balſames, muſt draw the colour out of vegetables with ſpirit of wine, which he muſt make to be coagulated together with it. After this aforeſaid manner, therefore you may draw out of any vegetable that hath in it ſalt, ſpirit and oyl, ſoluble and well ſmelling balſomes without the addition of any other ſtrange thing, which are not to be contemned.

And becauſe here alſo is taught that moſt odoriferous balſame of roſes, for roſes yield but a little oyl, without which that cannot be done, know that not only roſes or roſe leaves alſo are to be taken for the making the aforeſaid balſome, but alſo together with the leaves thoſe whole knots; for that yellow that is in them yields that oyl, not the roſe leaves, *&c.* And let what hath been ſaid ſuffice concerning our preparation of balſames, which if they be rightly made, are not I ſuppoſe, to be contemned, neither do I reject thoſe that are made without ſalt: Let him that hath better communicate them, and not carp at ours. And ſo I would that all and each proceſs ſhould be comprehended under ſome one general, *viz.* of diſtilling burning ſpirits, and oyls, by the help of a wooden diſtilling veſſel, and their conjunction by the help of their proper fixed ſalt, I could here add more things concerning the uſe, and vertues of ſpirits of wine, and of thoſe moſt ſweet vegetable oyls; but becauſe they are clearly enough ſpoken of by others, I account it a ſuperfluous thing to repeat the ſayings of others, being contented with the deſcription of one only general proceſs, which you may imitate in other particulars.

There follows now the uſe of the ſecond wooden veſſel, which is to be uſed inſtead of thoſe of copper or lead, ſerving for diſtillations, digeſtions, extractions, and fixations.

THe veſſel being made ready according to the preſcription ſet down before, there is nothing elſe to do, than to fit the furnace with the globe, and at your pleaſure to heat water in it, with a government of the fire in the furnace. Now all things may here be done, which otherwiſe are done in a common *Balneo*; where there is no other difference but of veſſels; here is uſed a wooden veſſel, there a copper, leaden, or iron, *&c.* In this operation alſo is uſed the ſame furnace with the ſame globe, which was uſed above in the diſtillation, wherefore you need add nothing elſe beſide, for nothing is more common than a *Balneum* in diſtillation; let the demonſtration therefore of the uſe of the copper globe ſuffice. Now I thought it worth while to ſet down ſome Chymical medicinal extracts, not common, which may be made by the help of this *Balneum*, which being rightly prepared do many things in many diſeaſes.

And firſt of a vomitive Extract.

TAke an ounce of the flowers of Antimony, of purifyed Tartar ℥ ij. of ſugar-candy ℥ vj. of rain water two pints, being mixed together, ſet them in a ſtrong vial in *Balneo* for to be cocted, and make them to boyl ſtrongly the ſpace of ten or twelve hours. Then the *Balneum* being cold, take out the glaſs, and pour forth the decoction, and filter it through a brown paper put into a tunnel; the filtred water will be reddiſh betwixt ſweet and ſowre, which take (the fæces in the filtre being caſt away) and in a ſmall gourd glaſs draw off all the moiſture with a gentle fire in *Balneo* unto the conſiſtency of honey of a browniſh colour, upon which again pour a pint of ſpirit of wine, poured forth into a vial with a long neck; and ſet it in *Balneo* with a moderate heat the ſpace of eight or ſixteen hours, and then the ſpirit of wine will ſeparate, and extract the eſſence, which will be more pure and noble, the fæces being left in the bottom; which after all things are cold are to be ſeparated by the Help of Filtration through a double brown paper. Then take the red tincture that is filtred, and in a gourd glaſs in a gentle Balneo draw off almoſt all the ſpirit of wine until there remain a matter like a very ſweet ſyrup, which being taken out keep as a moſt excellent vomitive, moſt profitable in many diſeaſes, where other Catharticks can do nothing. For this medicine works moſt gently, wherefore it may be given to children of a year and half old without danger, and alſo to old men. This medicine purgeth and attracts all humors from the nerves, and veins, opens all obſtructions of the liver, ſpleen, lungs, and kidneys, by which means many moſt grievous diſeaſes are cured.

I never found a vomitive comparable to this, which works quickly and ſafely. The doſe of it is from grain 1, 2, 3, 4. to 10. and 30. according to the age and ſickneſs. It may be taken by it ſelf, or in wine, beer, *&c.* and it will within a quarter of an hour begin to work, and ceaſeth within two hours. Sometimes it doth not provoke vomit at all, but only ſtools, where a glyſter is very helpful if it be given a little before the adminiſtring of the aforſaid medicine, being made of two or three ſpoonful of oyl Olive, and ſalt water; for the glyſter prepares the way below, ſo that it ſeldome then works by way of vomit: when alſo the patient may preſently after the taking of the medicine hold hot toſted bread to his mouth and noſe, which hinders vomiting and promotes the operation by ſtool, But in my judgment it is better not to hinder the medicine ſeeking a ſpontaneous way of operation, and not forced: For vomiting is more convenient for ſome, than purging by ſtool.

Now theſe things I have ſpoken for the ſake of thoſe, who although they abhor vomiting, yet deſire to be purged by the eſſence of Antimony, which is of all that I know the moſt ſafe, and ſweet Cathartick. For it ſearcheth the whole body far better than all others, and frees it from many occult diſeaſes, the which all other vegetable Catharticks could not do. It hath alſo this commodity in it, that although by littleneſs of the doſe, or the ſtrong nature of the patient it doth not work by vomit or ſtool, yet it doth not like other medicines hurt the body, but works either by ſweat or urine, ſo that Antimony being rightly prepared is ſeldome adminiſtred without profit. When as on the contrary, vegetable Catharticks being given in leſs doſe or by reaſon of ſome other cauſes do not work, although they do not make the body ſwell, and produce manifeſt diſeaſes, yet they threaten to the body occult ſickneſſes.

Now the *Arcanum* of Antimony doth not onely not do hurt, if it do not ſenſibly operate, but by inſenſible working doth much good to the body of man. Wherefore there is a great difference betwixt purging minerals, and vegetables. For minerals are given in a leſs doſe without nauſeouſneſs, but vegetables with a great deal of nauſeouſneſs, and ſometimes with danger to the ſick in a greater doſe. Now that nauſeouſneſs alſo proceeding oftentimes from the great doſe of the ungrateful bitter potions does more hurt than the potion it ſelf. I wiſh that ſuch kind of groſs medicines were aboliſhed, and the ſweet Extracts of Vegetables and Eſſences of Minerals were ſubſtituted in their place.

A purging Extract.

TAke of the roots of black Hellebore gatherd in fit time, and dryed in the air, one pound, the roots of Mechoacan, Jallap, of each four ounces; Cinnamon, Anniſſeed, and Fennelſeed, of each one ounce; of Engliſh Saffron a dram, powder all theſe Ingredients, then pour upon them the beſt rectified ſpirit of Wine, in a high glaſs gourd, and upon this put a blind Alembick, and ſet it in digeſtion; in Balneo until the ſpirit of wine be tinged red, which then decant off: and pour on freſh, and ſet it again in digeſtion; until the ſpirit be red, then pour on freſh again, and do this ſo often until the ſpirit will no more be tinged red, which commonly is done at three Times. Mix theſe tinged ſpirits, filter them, and in Balneo by a glaſs Alembick, with a gentle heat draw them off from the Tincture, and a thick juice will remain at the bottom of a browniſh colour, which you muſt take out whilſt it is yet hot, and keep it in a clean glaſs for its uſes. The Spirit of Wine drawn off from the extract may be reſerved for the ſame uſe. Now this extract is given from grains 3, 6, 9, 12. to 31. according to the age, and ſtrength, being mixed with Sugar, it hath not an ungrateful taſt, and it works gently, and ſafely, if it be not given in too great a doſe. And if thou wilt have it in the form of a Pill, mix with it being yet hot, an ounce of clear Aloes, and half an ounce of Diagridium powdered, being mixed bring it into a maſs for Pills, and keep it for your uſe. The doſe is from grain 1. to a ſcruple. It evacuates all ſuperfluous humors, but it is not to be compared with the medicine of Antimony. And this extract I put down for the ſakes of thoſe that fear Minerals, and abhor Vomits, which in my judgment is the beſt of all vegetable Catharticks.

A Diaphoretical Extract.

TAke the wood Saſſafras, Sarſſaparilla, of each ſix ounces; Ginger, Galengal, Zedoary, of each three ounces; long Pepper, Cardamoms, Cubebs, of each an ounce; Cinnamon, Mace, of each half an ounce; Engliſh Saffron, Nutmeg, Cloves, of each a dram: Let the woods be raſped, the roots and ſpices poudered, pour upon them, being mixed, the ſpirit of wine, and let the tincture be drawn forth in Balneo, as hath been aboveſaid of the purging Extract, evaporate away the ſpirit to the conſiſtency of honey, which keep for your uſe. It is good in the Plague, Feavers, Scorbute, Leproſie, Frenchpox, and other diſeaſes proceeding, from the impurity of the blood, curing them by ſweat. The Doſe of this Extract is from a ſcruple to a dram with proper vehicles: it provoketh ſweat preſently, driveth away all venenoſities from the heart, and mundifies the blood.

And although it be a moſt effectual vegetable Diaphoretick yet it may not be compared to thoſe ſubtile ſpirits of minerals, of which in the ſecond part. Alſo animal diaphoreticks have their commendations, as the fleſh of vipers, the fixed ſalt of ſpiders and toads, in their peculiar operations, where each alone without the mixture of any other thing puts forth and ſheweth its operations; neither are animal and vegetable diaphoreticks to be compared to the mineral, as *Bezoarticum minerale*, *Antimonium diaphoreticum*, and *Aurum diaphoreticum*.

A Diuretical Extract.

TAke the ſeeds of Saxifrage, Carraway, Fennel, Parſly, Netles, of each 3. ounces, the root of liquoriſh, the greater burr, of each an ounce, the powder of woodlice half an ounce. Let theſe being mixed and powdered be extracted with ſpirit of Juniper according to art: then mix theſe following things with the extracted matter: Take the ſalt of Ambar, Soot, Netles, of each half a dram, purified Nitre a dram: Let theſe be powdered, and mixed with the extract and this mixture be kept for uſe. The doſe is from a ſcruble to a dram, in the water of parſly fennel, *&c.* This extract forceth urin, opens the ureters, purgeth the reines, and bladder from all viſcous flegme (the mother of all tartareous coagulation) *viz.* if it be uſed timely: In this caſe is commended alſo the ſolution of flints, and cryſtals, made with ſpirit of ſalt. A greater commendation have ſalts of nephritick hearbs made by expreſſion, and cryſtalliſation, without calcination, the preparation whereof ſhall not here, but elſewhere be taught,

A ſomniferous Extract.

TAke of *Thebaic opium* four ounces, of Spirit of Salt two ounces, purified Tartar one ounce, ſet them being mixed in maceration in Balneo in a glaſs veſſel for a day and night, and the ſpirit of ſalt with Tartar will open the body of the *opium*, and prepare it for extraction, upon which pour half a pint of the beſt ſpirit of wine, ſet it in a gentle Balneo to be extracted. Decant off the ſpirit

that

that is tinged, and pour on freſh, ſet it in digeſtion till the ſpirit be coloured. Then mix the axtractions together, and put to them in a glaſs gourd two drams of the beſt Saffron, of oyl of Cloves a dram, and draw off the ſpirit of wine in Balneo, and there will remain a thick black juice, which is to be taken out, and kept in a clean glaſs veſſel. The doſe thereof is from one grain, to five or ſix, for thoſe of a mans age, but to children the ſixth or eighth part of a grain. It may be uſed in all hot diſtempers without danger. It provoketh quiet ſleep, mitigates pains as well outward as inward, it cauſeth ſweat; but eſpecially it is a ſure remedy for the epilepſie in children that are new-born; for as ſoon as it is given to them to the quantity of the eighth part of a grain in wine, or womans milk, there preſently follows reſt, and ſweat with ſleep, by whis means the malignity is expelled, the children are refreſhed, and deſire victuals, and the fit returns no more afterwards. Although haply the like ſymptomes may be preceived again, yet if the aforeſaid doſe be adminiſtred again, the children are refreſhed, and cured wholly, whereas otherwiſe they would have dyed, *&c.* whereof I have not reſtored few with this medicine. Moreover alſo there are very effectual anodine medicines, as thoſe volatile ſpirits of vitriol, allome, Antimony, and other minerals, with which, as alſo with that narcotick ſulphur precipitated from the volatile ſpirit of vitriol, nothing may be compared.

A Cordial Extract.

TAke red roſes four ounces, of the lilly of the valley two ounces, the flowers of borage, roſemary, ſage, of each an ounce; cinnamon, lignum aloes, of each two drams; cloves, mace, nutmeg, galangal, cardamoms the leſſer, of each half an ounce; the ſhavings of ivory, hartſhorn, of each an ounce; of *Engliſh* ſaffron a dram, of *nuxvomica* a dram: Mix them and reduce, them to a fine powder, and let the tincture be extracted with ſpirit of wine in Balneo, which is to be drawn off again, unto a juſt conſiſtence. Let the extract be kept for uſe. It may be uſed in almoſt all faintings, and other affects that are not joyned with a preternatural heat. The doſe thereof is from grains 3, 6, 9. to a ſcruple with proper vehicles; being often adminiſtred it refreſheth the ſpirit, corroborates the brain, and other parts of the body. It is made more efficacious by the adding of the eſſences of minerals, eſpecially of gold, of which thing ſee the firſt part concerning the ſweet oyl of gold.

Of an odoriferous Extract.

I Need not teach the making of any odoriferous vegetable extract, becauſe the manner of drawing forth, or diſtilling oyls of vegetables that have ſweet odores, hath been ſhewed a little before, as of hearbs, flowers, and ſeeds, which are the moſt noble, and ſweet eſſences of vegetables, by the odour whereof the heart and brain are corroborated, which being reduced into balſams are made tranſportable. Better extracts therefore, and more excellent cannot in my judgment be made out of vegetables, then thoſe aforeſaid oyls, unleſs any one would mix aromatical extracts made with ſpirit of wine with metallick ſolutions, and being mixed digeſt them, then there will a certain moſt odoriferous oyl go from the extract not only more efficacious, but more excellent than that common diſtilled oyl by reaſon of the admixtion of the ſpirituall metallick vertue, eſpecially of gold and ſilver, diſſolved in the acid *Menſtruum* communicating its vertues to the Aromatical oyl. Moreover any vegetable oyl may be exalted in vertues and odour by the help of ſpirit of urine, or ſalt Armoniack, by the help whereof not only odoriferous oyls are exalted, but alſo the inodorous oyls of vegetables are made odoriferous, if they be a while digeſted in ſpirit of urine: and not this only but every mineral, and metallick ſulphur, although the odour thereof be bound up with moſt ſtrong bonds, is opened by the benefit thereof, and is reduced by digeſtion in a very little time into a moſt ſweet and odoriferous eſſence. Lixivial ſpirits exalt the odours, and colours of ſulphurs; acid purge ſulphurs, but change their colours and odours. Musk and Civet get the ſweetneſs, and excellency of their odour from the ſubtile urinous ſpirit of a certain Cat, digeſting ſome certain fat and converting it into ſuch a kind of moſt odoriferous matter.

And let this that hath been ſaid ſuffice concerning Extracts, which might have been omitted, becauſe many of theſe kind of Extracts are found in the writings of other authors in many languages: but I was willing to ſet down theſe, leſt this book might ſeem to contain in it nothing elſe beſides the new way of diſtilling, being furniſhed alſo with good medicines.

Of Baths

A Little before hath been given a deſcription of a Tub for a Bath in which any one may ſit with his whole body except his head, not only to be waſhed in ſweet warm water, whether medicinal and mineral, but alſo to ſweat in without water, where the veſſel is heated by warm vapours, either of ſweet waters, or minerals. And every one may provide ſuch Baths for himſelf according to his neceſſity at home, whereby the ſame diſeaſes are cured as thoſe that are cured by the help of natural Baths, ſo that he need not for the baths ſake go a great journey, but may ſtay at home with his family and follow his Calling without trouble, when he hath occaſion and need to uſed them.

And whereas it cannot be denyed, that by the uſe of the Baths moſt grievous diſeaſes which cannot be cured by Phyſitians, are happily cured; I was willing for the ſake of my neighbour to publiſh this inſtrument together with the preparation of mineral waters; which publiſhing will not without doubt be without profit, and advantage. Wherefore I will in brief ſhew you the preparation of mineral, and ſweet waters, and their uſe, and firſt,

Of a Bath of ſweet or common water.

THere is no art to make a Bath of ſweet water, for you have nothing elſe to do, then to fill your veſſel with river or rain water, and to make a fire, which by the help of the copper globe will heat the water, which being ſufficiently heated, you may ſit in it, and cover the Tub, that the hot vapors evaporate not, nor the cold air enter in, and cool the exteriour parts of the body: Wherefore alſo you muſt apply a clean linnen cloth about your neck, leſt the warm vapors evaporate there: which being

rightly obſerved, you may ſit the ſpace of 1. 2. 3. hours, or as long as you pleaſe or your ſickneſs require. You muſt keep a continual heat as much as is neceſſary, which may be done by the help of that globe. If you be thirſty in the mean time you may drink ſome proper diſtilled drink according to the nature of your diſeaſe, of which thing nothing now, becauſe I am reſolved to write a peculiar *book de Balneis*, and here only to ſhew the uſe of that copper globe in heating of Baths. And although there be not a perfect inſtruction of all, yet of ſome Baths, and their uſes there ſhall a ſhort inſtruction be given in this place.

Of the nature, and property of natural Baths.

KNow that the greateſt part of medicinal waters in *Germany*, and other countries as well hot as cold carry with them from the earth a certain ſulphureous acidity more or leſs: in which acidity conſiſts that medicinal faculty and vertue of this or that water. And if thoſe waters loſe their odour and taſt by the exhaling of their ſubtile ſpirits, then alſo they looſe their vertues; although alſo there be found ſome waters, which have not only a ſpiritual ſulphur, but alſo are impregnated with a certain mineral, or metallick body mixed with Allome, or Vitriol, which comes not elſewhere then from the common water running through the mines. There are found alſo other baths, the power and vertue whereof conſiſts not in any ſpiritual ſulphur, nor in any metallick body mixed with ſalt, but only in a certain ſpiritual ſalt mixed with a certain ſubtil fixed earth, which waters do not run through metallick mines as others do, but rather ſtones of the mountaines calcined with a ſubterraneal fire, whence alſo they borrow their ſubtil acidity with their inſipid earth. And this no man will deny that hath the knowledge of volatile and fixed ſalts of minerals, and metals: the which I am able to demonſtrate with very many, and moſt evident reaſons, if time and occaſion would permit; but it ſhall be done ſometime or other as hath been ſaid in a peculiar treatiſe. Now therefore I will only teach how by ſalts, minerals, and metals, artificial Baths may be made, which are not only not inferiour to the natural in vertue, but alſo oftentimes far better, and that without much coſt or labour, which any one may uſe at home in ſtead of the natural for the expelling of diſeaſes, and recovering of health. And although I am reſolved to ſet forth a book that ſhall treat largely of the nature, and original of Baths, and of their uſe; yet I am willing now alſo to ſay ſomething in brief concerning it, and that from the foundation, ſeeing that there are ſo many different opinions of learned men, and thoſe for the moſt part uncertain.

As concerning therefore the original of the acidity as well volatile, as corporeal, as alſo the heat of Baths, know that is not one, and the ſame; for elſe each would have the ſame properties, but daily experience teſtifies the contrary: For it is manifeſt that ſome Baths help ſome diſeaſes, and others are hurtful for them, which comes from nothing elſe but from the difference of the properties of the mineral waters proceeding from a diverſity of mines impregnating thoſe waters. In a word, ſweet waters attract their powers, and vertues in the caverns of mountains from ſome metal and minerals of divers kinds, that have naturally a moſt acid ſpirit of ſalt, as are divers kinde of marcaſites containing copper and iron, and ſometimes gold and ſilver; alſo kinds of vitriol and Allome called by the ancients *Miſii*, *Rarii*, *Chalcitis*, *Melanteria*, and *Pyritis*, whereof ſome are found white like metals, but others diſperſed in a fat earth, of a round figure in greater or leſſer pieces: which ſulphureous ſalt mines whileſt the water run through, and humectates, that ſpirit of ſalt is ſtirred up, having got a *vehiculum*, and falls upon the mines by diſſolving them, in which ſolution the water waxeth warm, as if it had been poured on quick lime, or like ſpirit of vitriol, or ſalt mixed with water, and poured on iron, and other metals; where continually and daily that water running through the mines whoſe nature and properties it imitates, carrys ſomething with it: wherefore there are ſo many, and ſuch various kinds of Baths as are the mines by which the water is heated. Let him that will not believe take any mineral of the aforeſaid quality, and wrap it up in a wet linen cloth for a little while, and he will ſee it experimentally that the mineral ſtone will be heated by the water, and ſo heated, as if it were in the fire, ſo as thou canſt ſcarce hold it in thy hand, which at length alſo by a longer action will cleave in ſunder and be conſumed like quick lime.

I will publiſh ſome time or other (God willing) more fully, and clearly in a peculiar treatiſe this my opinion, which I have now delivered in very few words. Although to the ſick it be all one, and it matters not them, from what cauſe the baths come, and whence they borrow their vertues, if ſo be they may uſe them; this controverſie being left to natural Philoſophers that will controvert it, which none of them can better decide than a skilful Chymiſt, that hath the knowledg of minerals, metals, and ſalts.

And firſt of ſulphureous Baths that have a ſubtil acidity.

IN the ſecond Treatiſe I have demonſtrated the manner of diſtilling ſubtil, volatile, ſulphureous ſpirits, *viz.* of common ſalt, vitriol, allome, nitre, ſulphur, antimony, and other ſalts of minerals, and metals, and their vertues, and intrinſecal properties, now alſo I will ſhew their extrinſecal uſe, as they are to be mixed with waters for Baths. The vertues therefore of Baths proceed not from inſipid water, but from thoſe moſt ſubtile, volatile, ſulphureous, and ſalt ſpirits; but theſe being of themſelves not mixed with water unfit for Baths, to be uſed for recovering of health, by reaſon of their too great heat, and ſubtilty; the moſt high God hath revealed to us unworthy and ungrateful men his fatherly providence ſhewing to us by nature the uſe of them, and the manner of uſing of them for the taking away of diſeaſes; which (nature) being never idle, works unceſſantly, and like a handmaid executes the will of God, by ſhewing to us the various kinds of diſtillations, tranſmutations, and generations. From which teacher we muſt learn all arts and ſciences, ſeeking a certain, and infallible information, as it were out of a book writ with a divine hand, and filled with innumerable wonders, and ſecrets. And this is a far certainer knowledg then that empty, and imaginary Philoſophy of thoſe vulgar diſputing Philoſophers. Doſt thou think that that true Philoſophy can be ſold for a hundred Royals? How can any one judge of things hid in the earth, who is willfully blind in things expoſed to the light of the

the Sun, hating knowledge? I wiſh knowledge were ſutable to the name: how can any one that is ignorant of the nature of fire, know how to work by fire? fire diſcovers many things, in which you may as in a glaſs ſee things that are hid; The fire ſhews to us how every thing, waters, ſalt, minerals, and metals, together with other innumerable things are generated in the bowels of the earth by the reflexion of that central, and aſtral fire: for without the knowledge of fire all nature remains vailed, and occult. Fire (always had in great eſteem by Philoſophers) is the key for the unlocking of the greateſt ſecrets, and to ſpeak in a word, he that is ignorant of fire is ignorant of nature with her fruits, and he hath nothing, but what he hath read, or heard, which oftentimes is falſe, according to that; *He eaſily ſpeaks untruths that ſpeaks what he hath heard.*

He that is ignorant knows not how to diſcern betwixt the truth and falſhood, but takes the one for the other. I pray thee, thou that art ſo credulous, doſt thou think that thy teacher writ his books from experience, or from reading other Authors? May they not be corrupted and ſophiſticated by antiquity, and frequent deſcription? Alſo doſt thou underſtand the true, and genuine ſenſe of them? It is better to know, than to think; for many are ſeduced by opinions, and many are deceived by faith that is without knowledge.

And thus much for youths ſake I was willing to ſay, that they would not ſpend their tender years in vanities, but rather would make tryal in the fire, without which no man obtains a true knowledge of natural things; which although it ſeem hard in the beginning, yet it is pleaſant in old age.

Now follows the mixture of thoſe ſubtile mineral, ſulphureous, and ſalt ſpirits with water.

AS concerning the weight of the aforeſaid ſpirits that are to be mixed with ſweet water, giving it the nature, and property of natural baths, I would have thee know, that of thoſe, which in the ſecond part I ſhewed to be various, and divers, being, *viz.* not equal in vertue, the ſame weight cannot always be ſo accurately obſerved: ſeeing alſo there is a conſideration to be had of their ſtrength, and of the ſtrength of the patient.

Now you may at the beginning mix one or two pound of the ſpirits with a ſufficient quantity of the water, and then by ſitting in it make tryal of the ſtrength of the artificial Bath, which if it be too weak is to be increaſed by adding a greater quantity of the ſpirits, but if too ſtrong, then it is to be diminiſhed by abſtraction; of which more at large in *Arte noſtra Balneatoria*. Now this obſerve, that it is beſt to make Baths in the beginning weak, then ſtronger by little and little by degrees, as the nature of the ſick is accuſtomed to them, that it be not overcome by the unaccuſtomed uſe of them being too ſtrong. Wherefore Baths are to be uſed with diſcretion, and cautiouſly, for which matter I refer the reader to my *Artem Balneatoriam*, in which he ſhall find plain, and perfect inſtruction; let it ſuffice therefore that I have ſhewed the uſe of the Copper Globe, in heating Baths, which let the ſick take in good part, untill more come. Now follows the uſe.

Of Sulphur Baths.

APply the furnace with the Copper Globe to the Tub after the manner aforeſaid, and pour in a ſufficient quantity of ſweet water, which make hot with the fire kindled in the furnace by the help of the globe: which being ſufficiently warmed make the patient ſit in it, and pour into it ſo much of the ſulphureous ſpirit as is ſufficient; which being done cauſe that the tub be covered all over, that the volatile ſpirit vaniſh not, and as neceſſity requires, continue the heat till the patient come forth. Know alſo that the water is to be changed every time, and freſh ſpirits to be mixed. And this is the uſe of the Copper globe, in heating baths of ſweet or medicinal water, and that either of vegetables, or mineral, aud this made ſulphureous by art or nature; whereby moſt grievous, and otherwiſe incurable diſeaſes are happily cured: Of which enough now in this Treatiſe.

The uſe of the Copper Globe in dry Baths, which are more excellent than the moiſt in many caſes.

I Might have put off this matter unto its proper Treatiſe, where all things ſhall be handled more largely, and clearly: yet by reaſon of ſome unthought of impediments for a while procraſtinating the edition of the promiſed Treatiſe, I am reſolved to ſay ſomething of their uſe, after I have made mention of the humid, and indeed not only of the uſe of thoſe ſubtile, ſulphureous, and dry ſpirits, but alſo of the uſe of ſubtile, vegetable and animal ſpirits which are medicinal, becauſe in ſome diſeaſes dry baths are more commodiouſly uſed, than moiſt. He therefore that will provoke ſweat by a dry bath without water, let him provide a wooden box, or wooden inſtrument convenient to ſit in, ſtanding upon a ſtool boared through that you may raiſe it up more or leſs according as you pleaſe, and having boards appointed for the armes and feet to reſt upon. This box alſo beſides the great dore muſt have alſo a little dore ſerving for the putting in of a burning lamp with ſpirit of wine, or of any earthen veſſel with coals for to heat it. [*See the ſixth figure.*] The box being well warmed, let the patient go in, and ſit upon a ſtool, let the box be very cloſe ſhut all about, and the furnace with the Copper Globe be fitted thereunto, under which let there be a ſmall fire kindled, by help whereof the volatile ſpirit growing warm, goeth forth into the box like a moſt ſubtile vapour, penetrating all about the patient. But when this ſpirit is not ſufficient to heat the box, ſet in it a burning lamp with ſpirit of wine, or ſome earthen pot with coals (the beſt whereof are made of Juniper or the vine, eſpecially of the roots as being ſuch that will endure long, and cannot eaſily be extinguiſhed by the vapours of thoſe ſpirits) that the patient take not cold, and the vapours of the ſpirits may the better penetrate the body of the patient. Let the wick for the ſpirit of wine in the burning lamp be incombuſtible made of the ſubtle threads of gold, of which thing more in *Arte Balneatoria*. In the mean time that volatile ſpirit penetrates, and heats the whole body, and performs its office, being this way uſed better than by being mixed with water. When the patient hath ſate there long enough let him come forth, and

go into a warm bed to ſweat. Now before he go into the box let him take a doſe of that volatile ſpirit, inwardly which is uſed outwardly to ſprovoke ſweat, and accelerate the action. And by this means not only thoſe volatile ſulphureous ſpirits of ſalts, minerals and metals, are uſed outwardly without water to procure ſweat, but alſo the ſpirits of many vegetables, as of muſtard ſeed, garden creſſes, crude tartar, alſo of animals, as harts-horn, urin, ſalt Armoniack, *&c.* for the expelling of moſt grievous, and deſperate diſeaſes, Now the aforeſaid ſpirits have divers properties, the volatile ſpirits of ſalt, minerals, and metals have ſome, thoſe of vegetables and animals have others; thoſe have a ſulphureous and fiery eſſence; theſe a mercurial, and aerial; wherefore they ſerve for different uſes. In ſome diſeaſes thoſe ſulphureous are preferred; but in others vegetable and animal, where alſo a conſideration is to be had of the ſickneſs, and bath it ſelf, that one be not uſed for the other, to the great dammage of the ſick. For almoſt all natural baths, and volatile ſpirits of ſalts, minerals, and metals, partake of ſome moſt ſubtle, penetrating, heating, and drying ſulphureous ſalt ſpirit; but the ſpirits of vegetables, and animals partake of a certain volatility that is moſt ſubtle, penetrating, heating, opening, cutting and attenuating, both urinous and nitrous, *viz.* contrary to the former; as appears by the pouring on of any volatile ſulphureous ſpirit, as of common ſalt, vitriol, allome, minerals, and metals, upon the rectified ſpirit of Urin, or ſalt Armoniack: where preſently the one mortifies the other, and takes away its volatility, and ſubtilty: ſo that of both ſubtle ſpirits of divers natures there cometh a certain ſalt of no odour and efficacy. Whence it is manifeſt that all ſpirits partaking of divers natures, and eſſences have not the ſame faculties. Therefore be thou cautious in giving moſt potent ſpirits, leſt thou give an enemy inſtead of a friend, and learn their natures, vertues, and eſſences, before thou uſeſt them in medicine. But thou doſt ask, whether is that great force of thoſe ſpirits gone as it were in a moment? Did it evaporate in that duel? No I ſay, but tranſmuted into a corporeal ſubſtance, for of a moſt pure, mineral, ſubtle, and moſt volatile ſulphur, and a moſt penetrating animal *Mercury* is made a certain corporeal ſalt, which is wonderful, and deſerves to be called *Aquila Philoſophorum*, becauſe it is eaſily ſublimed with a gentle heat, in which many things lye: for it doth not only conduce to the ſolution of metals, eſpecially of gold, but alſo of it ſelf by the power of maturation doth become a moſt efficacious medicine: Of which no more at this time, becauſe I will only adviſe the reader, that he be diligent in ſearching out the nature of ſpirits, which although they change their bodies, yet are not therefore to be called dead, but rather reduced to a better perfection. And let this ſuffice concerning the dry uſe of baths in provoking ſweat for the expelling of diſeaſes: now for what diſeaſes this or that ſpirit ſerves, thou ſhalt find in its proper Treatiſe, of which there hath been mention above, but in a word, know that thoſe volatile ſulphureous ſpirits of ſalts, minerals, and metals, are good in all obſtructions of the inward parts, *viz.* of the ſpleen, lungs, and liver, but eſpecially are moſt excellent in heating the cold nerves, becauſe they do moſt efficaciouſly heat, attennuate, cut, expel, and mundify, wherefore they are good in Contractures, Palſies, Epilepſy, Scurvy, Hypochondriacal Melancholy, Morbus Gallicus, Itch, and other corroſive ulcers, and Fiſtulaes, *&c.*

But the ſpirits of another kind, as of Tartar, Harts-horn, ſalt Armoniack, Urine, *&c.* are hot alſo, but not ſo dry, and beſides the heating vertue, have alſo a penetrating, cutting, mollifying, attenuating, abſterging, and expelling power; wherefore alſo they work wonderfully in all obſtructions of the inward and outward parts: for they do better than all others, open the pores of the skin, and provoke ſweat, mollify, and open the hemorrhoides; provoke the *menſes* of young and elder women, purge and heat the womb, and therefore cauſe fruitfulneſs; they heat and purge a cold and moiſt brain, acuate the intellect, and memory, let they that be great with child take heed of them, and alſo they that have a Porous open skin. Such and other more properties, and that deſervedly are aſcribed to theſe ſpirits. Now thoſe two aforeſaid baths (in one whereof thoſe ſpirits are uſed in a humid way, being mixed with warm water, for the whole body to be bathed, and ſweat in, but in the other in a dry way where the vapours are by force of the fire made under the Globe, forced up into the ſweating box towards the patient, which being uſed after this manner do oftentimes penetrate, and operate more efficaciouſly than that humid way) are not to be ſlighted for the recovery of health, as doing things incredible. Now thoſe ſpirits not being found in ſhops, nor being made by any according to the manner that I have ſhewed in the ſecond Part, I would have thee know that there is yet another matter, which needs not to be diſtilled, and it is mineral; which being put into the Copper Inſtrument, doth of its own accord without fire yield ſuch a ſulphureous ſpirit, which penetrates very much, and goeth into the ſweating box, like in all things to that which is made out of ſalts, minerals, and metals. Nature alſo hath provided us another matter that is to be found every where, which being in like manner put into the Inſtrument doth by it ſelf, and of its own accord without fire yield a ſpirit, in vertue not unlike to that which is made out of crude Tartar, or ſalt Amoniack, Soot, Urine, *&c.* Of which in the ſecond Part, doing, *viz.* the ſame things with that which is made with coſts and labours. Thoſe foreſaid two matters therefore can do the ſame things, which are required for a bath and ſweating, which thoſe two foreſaid kinds of ſpirits, *viz.* mineral and ſulphureous, vegetable and animal can do, *&c.* Now what thoſe two matters which are eaſily every where to be found are, thou deſireſt to know; but I dare not if I would, for the ſake of the pious to reveal them becauſe of the ungrateful, and unworthy. For it is an offence to caſt pearl before ſwine, which yet the pious may, by the bleſſing of God find out by the reading of the reſt of my Writings.

Now follows a wooden veſſel which is to be uſed inſtead of a Cauldron in boyling of Beer, Metheglin, Vinegar, &c.

MAny things might be ſaid concerning this matter, for although men may be found in any

Place this Part I. before Page 67.

fig: I

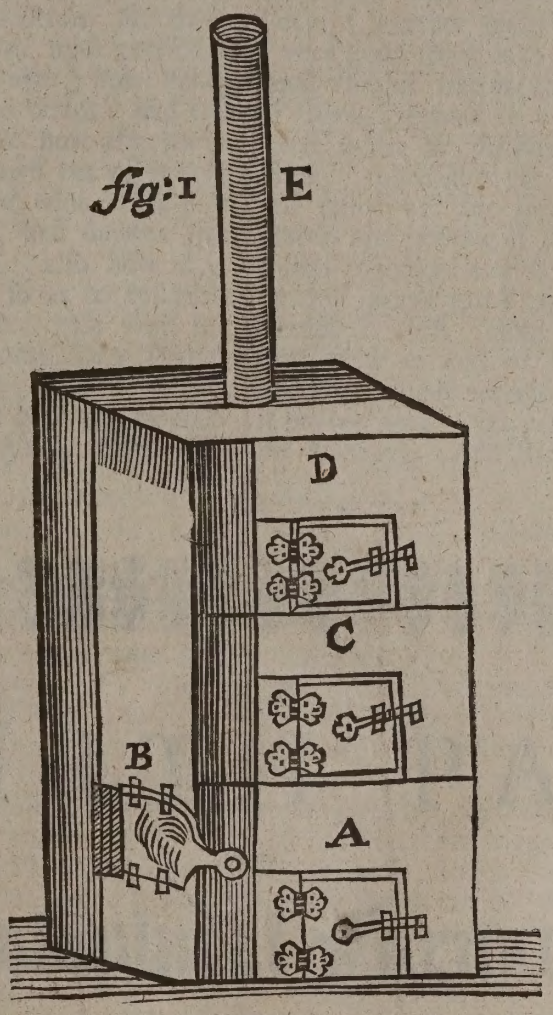
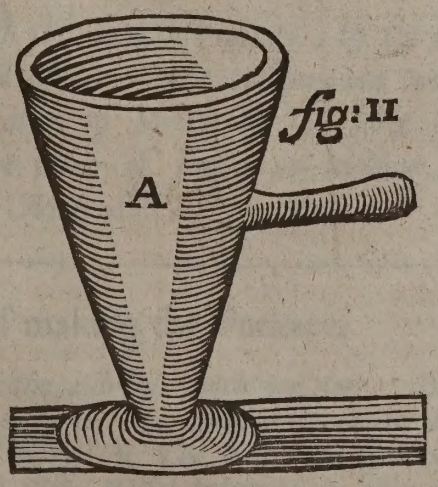
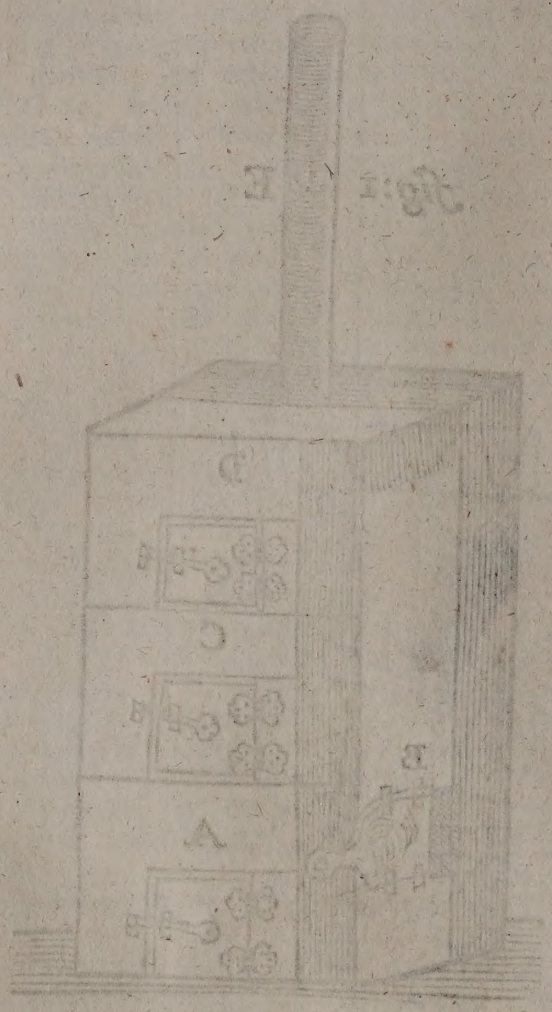


fig: II

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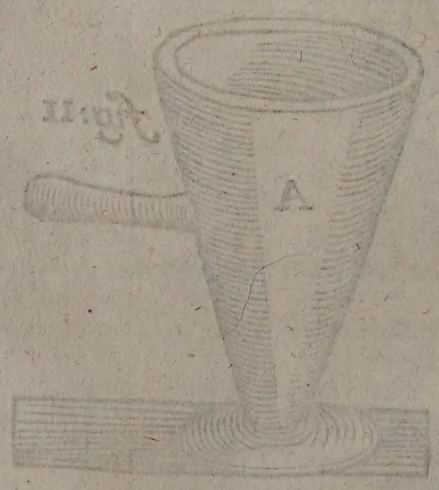

A

any part of the world, who know how to make malt of corn, and of this beer and vinegar; yet many things may be ſaid of this matter for the correcting of it; but becauſe it is not my purpoſe to ſhew ſuch things now, yet I ſhall ſay ſomething of the uſe of the copper globe which any one may provide inſtead of Caldrons, and which is to be uſed with a certain wooden veſſel in the boyling of Beer, which by this way he may, as hath been ſpoken above concerning the operations, make as well as by the help of Caldrons. Moreover I could here alſo teach ſome other moſt profitable ſecrets, *viz.* [*ſee Conſolat. of Seamen*] how honey may be freed from its ungrateful odour, and taſt by the help of precipitation; and how afterwards a moſt ſweet ſpirit is to be drawn out of it very like in all things to the ſpirit of wine: alſo how the beſt and ſweeteſt wine clear, and durable like to Mallago, may be made thence: alſo how after purging it is to be cryſtalliſed, ſo as to reſemble Sugar-candy in goodneſs and taſt: alſo how the ſweetneſs thereof may be converted into Tartar, very like to the natural: [*See Explicat. Mirac. Mundi.*] Alſo how out of fruits of trees, as cherries, apples, pears, *&c.* a very good, and durable wine in goodneſs, colour, taſt, and vertue, like to the natural, may be made; alſo how out of unripe grapes, that are not maturated either by the inclemency of the country, or air, their acidity being changed into ſweetneſs, very good Wines like to the Rheniſh may be made: alſo how out of ſorrel, and other vegetables, a very good Tartar may be made, and that in a great quantity without much coſts, reſembling the Rheniſh in colour, taſt, and other vertues: Alſo how out of Corn, (whether malted, or ground in a Mill) a very good ſpirit is to be made, and alſo a very good vinegar like to the Rheniſh; alſo how out of Corn, (ground in a mill) or Meal, a very good ſpirit is to be diſtilled without any loſs of the Meal, continuing yet fit to make bread. Such and more of this ſort might be taught in this place, but becauſe it is not good to divulge all things together, and at once, and this book would by this means grow bigger than I am willing it ſhould, if ſuch things ſhould be here taught, I ſhall make an end of this Book (omitting other excellent poſſible ſecrets of nature) which although it be but little, yet will without doubt be profitable to many. And ſo Reader farewel.

THE

FOURTH PART

OF

Philoſophical Furnaces:

In which is deſcribed the Nature of the Fourth Furnace; by the help whereof, Minerals and Metals are tryed, and examined after a more compendious way, than hitherto after the common manner; alſo the ſeparation of Metals by the force of Fuſion, and other neceſſary things that are done by the power of Fuſion or Melting. Moſt profitable for Chymiſts, Tryers, and Diggers of Minerals.

Of making the Furnace.

In the firſt Figure, A. *repreſents the Aſh-hole with its door.* B. *The Regiſter appointed for governing the Fire.* C. *The Hole with its door aſſign'd to receive the Crucibles and Coals.* D. *The Hole with the door of the Firſt Story.* E. *The long Pipe of Iron in the top of the Furnace.*
The ſecond Figure, *A Cone or Caſting Veſſel belonging to this Furnace.*

THis Furnace may be made greater, or ſmaller, as you pleaſe, according to the matter to be tryed: and if the *Diameter* thereof within, be but of one foot, you may ſet in it a crucible containing two or three pound; but greater crucibles require a greater furnace. Now this furnace muſt be quadrangular, and be built of ſtones, and lute, ſuch which abide the fire, of the height of one or two foot from the bottom to the grate, which muſt be ſuch as may be cleared from the droſs mixed with coals, or ſuch as was the grate of the firſt furnace, conſiſting of too ſtrong croſs iron bars faſtned in the furnace with certain diſtances for the receiving of 5, 6, or 7. other leſſer iron bars which are to be moveable, ſo that when they are obſtructed they may be removed, and cleared from the droſs; the lower part of the furnace muſt have near the bottom a hole (in the forepart) of the heighth, and breadth of a little ſpan, with an iron or copper door, ſhut-

ting close: the lower part also must have another hole near the grate on the other side with its register for the government of the fire, and for the attracting of wind. Above the grate, and a hand breadth from the grate must be another hole for putting in of coals, and crucibles, sutable to the proportion of the furnace, and the height thereof must be of one foot, and the latitude of half a foot, if the inward Diameter of the furnace be of one foot, whereby the crucibles may be the more conveniently handled, and the coals be cast in with a fire-pan: Let this hole also have a very strong door of stone covered over with lute, either of which may endure the fire, and shut very close, that the fire may thereby (when the crucible is placed in the fire) attract air, but only from the collateral hole under the grate. Let the height of the furnace (being coated above) from the hole appointed for the putting in of coals and crucibles, be of one great span: Let there also be a round hole in the furnace, having the third part of the intrinsecal diameter of the furnace, appointed for the flame and smoke; to which if you will use a very violent fire, put to it a strong iron pipe of the height of 5, 6, 8, or 12. foot, for by how much the higher you set your pipe, the stronger fire may you give, and if you will you may erect above the furnace 1, 2, or 3.. partitions with their doors serving to divers uses according to the flame that is gathered into them, by reason of divers degrees of fire, which is in them, for the lowest is so hot, that it can easily contain in flux fusible metals, minerals, and salts; and serve for cementation, calcinations, and reverberations; also for burning of crucibles, and other earthen vessels, made of the best earth (of which in the Fifth part) and for vitrifications, and sometimes for trials and burnings, *&c.* The second division of heat, which is more remiss, serves for the burnings of minerals and metals as of lead, tin, iron and copper, that are necessary for calcinations; also for the necessary calcination of Tartar, and the fixed salt of other vegetables, that is required in chymical operation, as also the calcining of bones, and horns for cuples, and the ashes of wood. The third division or chamber is yet more remiss, and serves for the drying of crucibles, and other vessels that are made of the best earth, and afterwards to be burnt in the first partition. There may also other things be done by the help of these partitions, so that thou needest not for their sakes kindle a peculiar fire. But if thou wilt give a melting fire the strongest of all, put a long pipe to the lower hole appointed for drawing wind, and having a register; for by how much the fire attracts the air more remotely and another flame is forced to beat upon the metals, so much the greater power of the heat is there in the fusion of them. For which busines sake thou hast need to have as that inferiour pipe, so also that superiour pipe in the top of the furnace. And if thou hast a fit chamber, in which another may go up from below by the proper chimney, thou mayest build another furnace in the superiour chimney, and perforate the wall with the applying of a register, that the fire may be forced to attract the air from below through the collateral chimney, where you need not that long pipe but only may open a door, or window of the lower chamber, that the air may come into the chimney; and the fire attract the wind out of the collateral chimney, which it doth very vehemently, yea and stronger, than if it were helped with bellows, so that even the furnace, unless it were built of very good and fixed earth, would by too great a heat be destroyed; for oftentimes the strongest crucibles melt with too much heat, wherefore a register is made for the governing of the fire.

And by the help of this furnace, with Gods blessing, I found out my choisest secrets. For before, and indeed from my youth I underwent the trouble of those vulgar labours performed by bellows, and common vents, not without loss of my health, by reason of the unavoidable malignant and poysonous fumes, which danger this furnace was without, not only of poysonous and malignant fumes, but also of all excessive heat: For our furnace sends forth no fume (but above, so drawing, that the door being opened for the putting in of coals, it attracts by the vehemency of the fire, another fume, that is remote by the distance of half an ell. And because the fire doth so vehemently attract, it keeps its heat within it self, so that there is no fear of burning; yet you must cover your hand that holds the tongs with a linnen glove twice double, and wet in water, and with the other hand a wooden fence that is perspectible to preserve your eyes; otherwise it wants all danger of vapours, or fumes, as hath been said, and all excessive heat; the which is a great benefit in Art. I do ingenuously confess, if I had not found this a few years since, I had not without loss left off all Alchymy together with its tedious labours. For I had spent many years of my life in great misery of labours, in superfluous cares, and watchings, as also in stinks, so that going into my Elaboratory with loathing, I should behold so many materials in so many, aud such various pots, boxes, and other vessels, and also as many broken as whole instruments of earth, glass, iron, and copper, and did judg my self so unhappy that I had made my seif a slave to this Art, and especially because scarce one of 100, whereof I was one, did get his victuals and cloths thereby. For these reasons I was determined to bid farewel to Chymistry, and to apply my self to Physick, and Chirurgery, in which I was always happy. But what? Whilest I thought to do as I resolved, and to cast forth of the doors all and each vessel of divers kinds, I found some crucibles broken, and in them many grains of gold and silver, formerly melted in them, which together with others gathered together, I thought to melt; but seeing I could not melt such things being very hard to be melted, without the help of bellows (which I had sold) I began to consider the matter with my self more seriously, and so I found out this furnace, and being invented, I presently built and proved it, which in tryings I found so good, that I did again take hope of my labours, and would no more despair.

Seeing therefore an easie, and compendious way of melting metals, I began to work, and to begin a new search, and every day I found more and more in nature, *viz.* the greatest and most pleasant secrets of nature; wherefore I did without ceasing seek, until God had opened mine eyes to see that which I sought a long time for in vain. Where also I observed, that although I had before had more knowledge of nature, yet without this furnace I could scarce have done any thing that had been singular. And so God willing, by the help of this furnace, I found out more and more dayly, for which blessing I give to the immortal God immortal

tal thanks, reſolving to communicate this new invention candidly, and faithfully for the ſake of my neighbour. Judge therefore O Chymiſt! whether this, or that which is made by the help of bellows and common vents, be the beſt? For how long doth he that will melt a hard metal in a wind furnace give fire to it before it will flow, and with what loſs of time, and coals? He that doth melt by the help of bellows hath need of a companion to blow, with great danger of breaking the crucible with the winde, and of making it fall when the coals are abated, or of impurities falling into the crucible in caſe the cover thereof ſhould fall off, although there can be no detriment by impurities falling in, if the matter be metallick, but not ſo if it be a ſalt or mineral, (without which that cannot be perfected in the fire) not induring the impurities of the coals, but boyling over by reaſon of them. Now our furnace is free from this danger, becauſe the wind comes from beneath and crucibles come always into ſight, not being ſo overwhelmed with coals as in the common way, *&c.* For by this means the matter to be melted is flowed, although the crucibles be not covered over with coals, nor with a cover, and although thou haſt not a companion to blow, for you may at pleaſure give any degree of fire by the direction of the regiſter. When therefore thou makeſt any trial in the fire have this furnace which is recommended to thee, which build rightly with its regiſter for the governing of the fire, and for the drawing of wind, and without doubt this labour ſhall not be in vain.

How minerals are to be tryed.

THe manner of trying minerals hath been already made known, wherefore it is not needful here to write many things, becauſe divers Authors, as *Georgius Agricola*, *Lazarus Ercker*, and others have ſufficiently wrote thereof, to whoſe writings I refer thee, eſpecially to that moſt famous *Lazarus Ercker* which is ſo much commended, *De Probatione Mineralium*, as well maglignant (obſtinate) as mild. But thus much know, being that which experience hath alſo taught us, that neither he nor his predeceſſours had a perfect knowledge of all things, nor would reveal all things they knew. For many excellent things do yet lye hid, and perhaps ſhall yet for a while lye hid by reaſon of the ingratitude of the world; although the moſt famous Philoſophers do with one conſent affirm that imperfect metals, as lead, tin, iron, copper, and Mercury, are intrinſecally gold, and ſilver, although it may ſeem very improbable to many that are not curious, but contented with the opinions of their parents; ſuppoſing thoſe minerals to be barren that leave nothing in the cuple, when they are tryed with lead: when as yet that proof by cuples although famous, is not yet that true Philoſophical trial of metals, but only vulgar, according to the teſtimony of Philoſophers, as of *Iſaac Hollandus*, and others, eſpecially of *Paracelſus* in many places treating of metals, but eſpecially in his book *Vexationum Alchymiſtarum*, containing a true deſcription of the properties, and perfection of metals. Which although not being to be underſtood by all, matters not; for a very eaſie art is not to be communicated to all, according to *Paracelſus* ſaying. Imperfect metals being freed from their impurities have in them abundance of gold, and ſilver. But how metals are to be purged, and ſeparated he doth not teach, but only commends *lead* to be the Author; which made the Alchymiſt believe that it was common lead, not knowing that the water thereof (lead) did not only purge other metals, but alſo lead it ſelf; ſuppoſing alſo that the trial of tin, copper, and iron, made in a cuple with lead to be that true genuine bath thereof; not obſerving that lead hath no affinity with iron, and tin in a ſtronger fire, but to reject what is black, and unclean, without any perfection. Now this lead can do, if *viz.* it be mixed with a mineral that hath gold or ſilver in it, and be melted in the fire being incorporated with it, it may together with their impurities enter into the Cuple, the good gold and ſilver being left in the Cuple, which is the proof of minerals that are digged, and uſed; and it is done upon this account, *viz.* gold and ſilver may be naturally purged of their ſuperfluous ſulphur, ſo as never to be any more radically united, and mixed with thoſe that be imperfect, as being polluted with abundance of crude, impure ſulphur, although they may be melted together in the fire; yet that mixture being retained in the fire, the combuſtible ſulphur of common metals, acts upon its own proper argent vive, and turns it into droſs, which being ſeparated from the metals enters into the porous matter of the cuples, that which doth not happen in teſts, fixed in the fire, which that droſs being ſeparated from the metals cannot enter into, being made of an earth that is durable in the fire, the droſs remaining in them, which otherwiſe was wont to enter into thoſe cuples that are made of the aſhes of bones, or wood. Wherefore by little and little it goes away into the cuple, *viz.* as much as the fire reduced into a Litharge, or droſs, until all the Lead mixed with the Gold and Silver together with other imperfect metals mixed with it go into droſs, and hide themſelves in the cuple, the pure gold and ſilver being left in the cuple. For Lead in a plain veſſel, feeling the heat from above, but beneath cold, is turned into a Litharge, which if it be in an earthen fixed veſſel, the Litharge remains, and goes into a yellow tranſparent glaſs at laſt, if it be not mixed with other metals, as iron, copper, tin; which being mixed therewith, give to the glaſs a green, red, black, or white colour, according to the quantity of the metallick matter: but in a porous cuple made of aſhes, the Litharge, or droſs finding pores, enters into the cuple by little and little, and ſucceſſively, until all the Lead be entred in, which could not be if it were not turned into Litharge. This vulgar trying is therefore nothing elſe but a tranſmutation of Lead, with the imperfect metals mixed with it, into droſs, which entring into the cuple leaves in the cuple pure gold, and ſilver, that cannot be turned into droſs by reaſon of their purity.

But perhaps this diſcourſe may ſeem to thee unprofitable, and ſuperfluous, becauſe this trial of metals is known all the world over: but for anſwer, I ſay that it is not ſuperfluous, becauſe many refiners erre, ſuppoſing that corporeal Lead together with the imperfect metals that are mixed with it, goes into the cuple, not being yet turned into Litharge, becauſe corporeal Lead is again melted from thence; for whoſe ſake this diſcourſe is not properly ordained, as being thoſe that operate out of uſe, and cuſtom only without diſcretion; but rather for their

ſakes, who do inceſſantly ſeek after, and ſearch into the ſecrets of nature, *viz.* ſeeking after that Philoſophical tryal, which is known to few, by the help whereof more gold and ſilver is obtained than by the common way, but it is not to be diſcovered in this place; for all muſt not have the knowledge thereof; It is ſufficient that I have demonſtrated the poſſibility thereof. Yet know this, if thou knoweſt how to prepare Lead, Tin, Copper, and Iron, and to fit them for a radical union, *viz.* that aforeſaid water of Saturn, ſo as they may endure the force of the fire together, thou mayſt ſeparate and attract gold, and ſilver from the aforeſaid imperfect metals, and with gain leaving them in the cuple, or elſe you ſhall draw little or nothing from thence [*See Explicat. Mirac. Mundi.*] And if you do intend to try them with Lead after the vulgar way, and bring them into droſs, yet you do nothing, becauſe tin and iron abounding with gold and ſilver, do not remain with the lead in a ſtrong fire, but are lifted up like a skin or droſs, by reaſon of their ſuperfluous ſulphur, ſwimming like fat upon water, without any ſeparation, unleſs it be tin or iron, which got gold or ſilver from the mine in their firſt fuſion.

And by this means it falls out ſometimes, that ſome may make a good proof, but out of ignorance, not knowing a reaſon of their operation, wherefore they cannot do the ſame again. For if Chymiſts, and Refiners did conſider the matter more profoundly, enquiring the cauſe, wherefore lead being tryed, deprived of its ſilver, and melted in a cuple, ſhould yet contain in it ſelf ſilver, without doubt they would hit upon a good foundation; without which knowledge all their labour in imperfect metals would be in vain. And let this ſuffice concerning that Philoſophical tryal, which is known to few; There is no need of ſpeaking any thing of that vulgar, being every where known, of which *Lazarus Ercker* wrote plainly and fully.

There is alſo another proof of minerals, which is without Lead, with Venice, or any other good fuſible glaſs, where one or two ounces of the powdered mineral are mixed with half an ounce of the powdered glaſs, and being mixed and covered in a crucible, are melted, and poured out; by which means the glaſs attracts, and diſſolves that mineral, and is thereby coloured, which ſhews what metal is contained in the mine, after which may be made another tryal by Lead, tryal being firſt made by the firſt proof. And this is the fitteſt proof for the hardeſt minerals, which are even invincible, as are the *Lapis hemititis*, *ſmiris*, granats, talck black and red, and thoſe which abound oftentimes with gold, and ſilver, which becauſe they cannot be mixed with Lead are not eſteemed, but are oftentimes caſt away, although they abound with gold and ſilver, and this becauſe they cannot be tryed, Which being tryed after the aforeſaid manner, and conſequently the treaſures lying therein being diſcovered, thou mayſt afterward with more confidence handle them, and reduce them to better profit. Now thoſe colours which follow, indicate the tenure of them. Glaſs reſembling the greenneſs of the Sea ſignifies meer Copper, but the greenneſs of graſs, ſignifys copper, and iron mixed together: glaſs of a ruſty colour ſignifys iron: yellowiſh glaſs ſignfys tin, glaſs of a yellow golden colour, or like a red ruby ſignifys ſilver: Blew glaſs like a ſaphir ſignifys pure gold; a ſmaragdine ſignifys gold mixed with ſilver: An Amethyſt colour ſignifys gold, ſilver, copper, and iron mixed together. Beſides theſe, glaſs ſometimes gets other colours, according to the diverſity of the weight of divers metals mixed together; which uſe will teach with a further practiſe that is to be made with Saturn.

There is alſo another precurſory tryal of minerals, and metals, which is made with Salt-peter; where eſpecially tin, iron, and copper do largely draw forth their treaſures hid in them, which they will not yield being tryed by Lead, the which is not a ſign of their poverty, but rather of not a true tryal made by Lead, which is not the true, and genuine judge, and tryer of metals. For otherwiſe (if it were) it would draw forth their treaſure as well out of a greater quantity of metallick matter, as out of a leſſer. Now follows the tryal by Nitre: Make a mixture of one part of ſulphur, of two parts of pure Tartar, and four parts of purified Nitre, then take an ounce of this mixture, and one dram of the mineral or metal ground ſmall, mix thoſe together, and being put into a crucible, put a red hot iron or burning coal to them, and that mixture will be inflamed, and yield a moſt vehement fire, reducing that mineral or metal into droſs: And what is not brought into droſs muſt again be mixed with the aforeſaid mixture, and be burnt as before, until the whole be conſumed by the fire. Then make that droſs or ſalt containing in it the metal that is deſtroyed, to flow ſo long in a ſtrong crucible, untill it be made glaſs; which being poured out there are found grains of gold or ſilver, which came from the mineral or metal that was tryed. And this opperation (if it be well done) will be a pleaſant ſight, but without profit, becauſe it cannot be done in a great quantity, and by reaſon of the price of the Nitre. Wherefore I ſet this way of tryal only for demonſtration ſake, that it might appear how almoſt all tin, iron, and copper, contain in them gold and ſilver, although they do not draw it forth in the Cuple.

Now do not ſuppoſe that this is tranſmutation, which is only ſeparation; wherefore thou muſt conſider with thy ſelf how that may be performed otherwiſe. But take heed that thou do not kindle this mixture from beneath, being put upon the coals, but from above, by reaſon of the danger of flaſhing: Alſo metals are eaſily fuſible by the following mixture. Take one part of the ſaw-duſt of the wood of the teil-tree being well dryed, two parts of ſulphur, eight or nine parts of pure Nitre. Make *ſtratum ſuper ſtratum* in a cruſible, and take to 11, or 12. parts of this mixture; one part of the metal ſubtilly ground, and kindle them, and the mine being melted will yield grains of pure Gold and Silver, if the mine were not too impure, the impurity thereof be conſumed by that moſt vehement fire. And if this tryal be not for thy profit, yet it is rational, and may be for thine inſtruction.

Of the melting of mines and metals.

THe melting of theſe in a great quantity is not for this place, becauſe they cannot be done by this furnace, but it is treated of plainly enough by others in their writings of minerals.

Of the ſeparation of metals.

THis is a moſt ancient and profitable Art, whereby one metal may be ſeparated from another: And it is for the moſt part done 4. ways, *viz.* by *Aqua Fortis*, by cement, by flux with ſulphur, and lead,

lead, and laſtly by Antimony; which ways that moſt witty *Lazarus Ercker*, hath clearly, and diſtinctly deſcribed, whoſe deſcription is not to be found fault with, although ſome neceſſary things may be added thereunto, which being but few, I thought it ſuperfluous to add them in this place.

And that ſeparation conſiſts in three chief metals, Gold, Silver, and Copper; he made no mention of other metals, and two of the aforeſaid four ways are in uſe, as very eaſie, for they are done with *Aqua Fortis* and Cement, the two others moſt commonly neglected, which are done by benefit of melting with Sulphur and Lead; and alſo by Antimony: that which is admirable, becauſe metals are eaſier ſeparated by benefit of theſe two ways, than by *Aqua fortis* and Cements, ſuſpected of waſt, whereas not Sulphur and Antimony, but the ignorant worker, not knowing the nature of Sulphur and Antimony, is rather to be blamed, becauſe he knows not how to order them, and withall leaves the nearer way of ſeparation: and I muſt needs confeſs it that without this furnace I would not ſeparate with them, becauſe with that common way of furnaces and bellows, the ſtink of Sulphur and Antimony hurtful to the Liver, Lungs, Brain, and Heart, is received by the Noſtrils to the hazard of health: for which cauſe I do not wonder that thoſe two wayes requiring greater diligence than thoſe two former by *Aqua fortis* and Cements are rejected. But this Furnace being known, with which without danger one may melt, I doubt not of excelling the two former ways hereafter as more profitable than them. For he who knows Antimony, may not only eaſily with ſmall coſt ſeparate Gold from the addition without any loſs of it, and ſpeedily refine it, but alſo eaſier ſeparate gilt ſilver, than by Sulphur, Lead, *&c.* in great ſtore without any loſs of Gold or Silver.

And this is the eaſieſt way of the ſeparation of Gold and Silver which is done by the benefit of melting, requiring no more charge than the coals; for there is Antimony which hath Gold in it as much as it is worth, which will be the ſeparators gain: I would have you know this, how Antimony may again be ſeparated from Gold and Silver, not by the common way, which is done by bellows, but by the ſpecial way of ſeparation wherewith the Antimony is preſerved, ſo that it may be uſed again for the ſame purpoſe; which I will treat of in another place. Beſides the four ways ſpoken of, there is alſo another way, beſt of all, by the nitrous ſpirit of ſalt, namely after this manner: ℞ the ſpirit of ſalt (prepared by our firſt and ſecond Furnace) acuated with Nitre diſſolved in it, to which add grain Gold mixed with Silver and Copper; put it in a glaſs vial in hot ſand to diſſolve, and the Gold together with the Copper will be diſſolved in it, and the Silver left in the bottom of the vial: decant off the ſolution, to which add ſomething, precipitating Gold, and make them boyl together, and the pure fine gold will be ſeparated and precipitated like the fineſt meal, ſerving Writers and Painters; the Copper being left in the water; which thou mayſt if thou wilt precipitate from the water, but it is better to take away the water, which will ſerve again for the ſame uſe. If the precipitated Gold be waſhed and dryed it gives in the melting (by which nothing is loſt) the beſt and pureſt Gold. For finer gold can neither be made by *Aqua fortis* nor by Antimony.

Therefore this is the beſt way of all, not only for the ſmall coſt, but alſo for the eaſineſs yielding the beſt Gold of all others.

Then take the calcin'd Silver left in the gourd, ſweeten and dry it, which done make a little ſalt of Tartar to melt in a crucible, to which by courſe put a little of the refined ſilver with a ſpoon, and it will be preſently made a body without any loſs. You may alſo boyl that Calx as yet moiſt newly taken out of the gourd with a Lixivium of Salt of Tartar, even to the evaporation of all moiſture: and melt the dry remnant, where alſo nothing is loſt. Without this medium the calx of Silver (drawn from *Aqua Regia*) is not fuſible of it ſelf, turning into a brittle matter, like horn that is white, or of a middle colour between white and yellow, called therefore of Chymiſts the *Horn of the Moon*; in reducing which many have tried much, which reduction we have already taught. For want of ſpirit of ſalt take *Aqua Regia* made of *Aqua Fortis* and ſalt Armoniack, which doth the ſame, but with greater charges. This alſo is to be preferred before other ways, which makes to the ſeparation of any Gold of any degree, if ſo be it exceed Silver in weight; which is neceſſarily required in the ſolution made with *Aqua Fortis*.

But that you may ſee the prerogative of this ſeparation, mark a little, when you ſeparate by the *Quarto* and by *Aqua fortis* you muſt put juſt two or three parts of refined Silver to one of courſe Gold, where firſt the coſt and labour of refining the Silver to be melted and grained with Gold are required: then a good quantity of *Aqua fortis* to diſſolve, precipitate, edulcorate, dry and melt a great deal of ſilver. Conſider then I pray, the labours and charges of my ſeparation and the vulgar. When thou ſeparateſt with Cements there is need of boxes, and continual fire of one degree, which labour is tedious for times ſake, and coſtly for coals, which labour you muſt twice or thrice take in regard of the mixt droſs. Now again conſider the labour and charges of both ſeparations. When thou ſeparateſt by Sulphur and Antimony, which is the beſt way, without great charges, if thou knoweſt to ſeparate Gold from Antimony without blowing, but this is tedious becauſe thrice greater labour than our way, tedious indeed by reaſon of the difficulty of a perfect ſeparation of Gold and Silver from the Antimonial droſs. Think therefore what way of ſeparation you will uſe to refine Gold ſpeedily, ſurely you will chuſe mine.

This way of ſeparation hath alſo this prerogative, that it hath no need of refined ſilver which is done by the benefit of burning, but only its granulation, ſolution or ſeparation by the uſe of *Aqua Fortis*, where though copper mixt with ſilver makes waſt, yet by the help of this ſalt it is ſoon precipitated. By this means gilt ſilver is ſoon ſeparated, the gold being diſſolved by the nitrous ſpirit, and precipitated with the aforeſaid matter precipitating. As for the ſeparation of gilt ſilver which is to be done by help of fuſion, and none is eaſier done than with Sulphur and Antimony, where when the neceſſary manual (ingredients) are known; a great deal is ſeparated in a ſhort time, but if thou knoweſt not how to handle Antimony and Sulphur (for which our Furnace very well befits) leave them, and uſe the common way; therefore lay not thy fault afterward on me, writing for thy good.

Of ſeparating the courſer metals.

THe manner of ſeparating Tin from Lead, and Copper from Iron, without loſs of both metals, by preſerving both, hath hitherto been unknown, which ſeems impoſſible to me by reaſon of the combuſtibility of both metals; and ſuperfluous for the ſmall profit, and ſaving charges. But how Gold and Silver may be ſeparated from Tin with which commonly this abounds, without any waſt, hath been long ſince ſought to no purpoſe: but a poſſibility will appear to a ſerious conſiderer; and though I never tryed in great quantity, being content with a precipitation made with a little; I am yet perſwaded this buſineſs will ſucceed in a great quantity and with much profit; namely by the help of a Furnace made on purpoſe where gold and ſilver precipitated with lead and *Halb Kopf* by extream heat of fire; that tin is extracted to the remanence of the tenth part, which remainder you muſt peculiarly take and keep. Which done you muſt precipitate new tin in the foreſaid Furnace, and ſo extract to the remainder of the *Regulus*, which being extracted from, is to be added to the firſt and reſerved; which labor is to be reiterated, till thou haſt a ſufficient quantity of *Regulus* filling the Furnace; which again thou muſt precipitate; for by this means gold and ſilver are brought together, ſo that they may eaſily afterward be ſeparated from the ſuperfluous tin. By this means I count the ſeparation profitable, where but little ſubſtance is loſt, which is turned into aſhes and ſmoak. Nor doth adding lead and *Halb Kopf* hinder, becauſe ſometime lead is mixt with tin, and the *Halb Kopf* is ſeparated again. It is good therefore to ſeparate pots and old diſhes, by reaſon of the mixture of lead, and to precipitate the gold and ſilver from them, by the adjection of *Halb Kopf* only, where the reſidue is no way altered by the *Halb Kopf*, therefore thou mayſt ſell it, or refine it again: which in my judgment will be to great advantage.

What is to be held concerning the perfection of Metals.

THis knot is ſcarce ſoluble, for ſo many and divers opinions of ſo many ages, ſo that moſt men ſlighting the teſtimonies of true Philoſophers, will not believe the truth, eſpecially, becauſe ſcarce one of an hundred can be found who is not impoveriſht with this art: the incredulous therefore is not to be blamed for his doubting, no ſigns of truth appearing, yet experience teſtifies a poſſibility by art and nature, though examples are rare. I pray with how great abſurdity ſhould one deny Heaven and Hell never ſeen? But thou ſaiſt we muſt believe this as revealed by God, his Prophets and Apoſtles; but ſo is not this, but the Philoſophick tradition of Heathens. I anſwer, though moſt Philoſophers were heathen (yet ſome have been Chriſtians) yet their works are not to be deſpiſed, becauſe not handling our ſalvation: to whom if CHRIST had Preached, ſurely they had believed him. For it appears by their books, that they were pious and honeſt Men; who though not Profeſſors of CHRIST, yet they did His Will indeed, which we, though not in words, in action deny; who if they had been wicked, why took they ſo much pains in making books for the good and profit of their Neighbour about Vertue and Piety? Why ſpent they not rather their life time in leiſure and pleaſure, as is the cuſtom now adaies with them who are appointed to inſtruct us? Why ſhould they gull poſterity with trifles and lyes, expecting from thence no profit? For moſt of them were not poor, but very rich Kings and Princes. Beſides theſe, there have been many Chriſtians ſerioully confirming the truth of the Art: Men indeed of ſpecial note, namely, Biſhops, Doctors, *&c.* Such were *Thomas Aquinas*, *Albertus Magnus*, *Lullius*, *Arnoldus*, *Roger Bacon*, *Baſil*, &c. Why ſhould very pious men deceive poſterity with their Works, and lead them into Errors? Although there ſhould not remain the Works of Famous Worthies, yet there would be a plain confirming the truth of this Art. For I am perſwaded there are ſome to be found having this knowledge, and privately poſſeſſing it. For who is ſo mad to reveal himſelf to the world, to receive nought but envy for his reward? Let no man therefore doubt of this ſecret Art's truth. But ſay you: Why ſtand you ſo much for the Art? Did you ever ſee or perform any thing in it? I reply, though I never made projections to perfect metals, nor ſaw tranſmutations; yet I am ſure of this, I have often from metals with metals, leaving no gold and ſilver in the cupel, extracted gold and ſilver by the help of fire: But I will not have you think that one imperfect metal will perfect another, or turn it into gold or ſilver, impure and droſſy without, in compariſon of gold and ſilver; for how can ſuch metals perfect another imperfect? Which thus underſtand. For as in the vegetable Kingdom, water cleanſeth water, or juice with ſeething as is wont to be done in purifying honey and ſugar, or any other vegetable juice, with common water, and white of eggs: ſo alſo you muſt underſtand of mineral juices or metal, of which if we know the water and white, ſurely we might refine the impurity, in which gold and ſilver lie hid, as in black ſhales, and powerfully extract gold and ſilver, which is not a tranſmutation of metals, but an eduction of gold and ſilver from the dunghil; Doſt thou ask how Gold and Silver can be educed from copper, iron, tin, and lead, to wit, by the help of lotion, out of which none is drawn with that beſt proof (as 'tis thought) of Cupels? To which we anſwered before of the proof of Cupels not to be ſufficient for all the ſeveral metals. I need therefore ſay no more, but I refer the ſtudious Reader to *Paracelſus* his Book, the *Vexation of Chymiſts*, where thou ſhalt find another lotion and purification of metals, which heretofore was unknown to Miners and Dealers in Minerals. As for example: A Miner finding the oar of copper, uſeth his skill delivered by the ancients to his utmoſt endeavour, whereby he may cleanſe it and reduce it to metal: where firſt he breaks it into pieces, and boyls it, for to take away the ſuperfluous ſulphur, then by vertue of melting, he brings it into a ſtone (ſo called) which afterward again he commits to fire, and freeth it by the addition of lead, of its gold and ſilver; which done, he blacks and redens it, turning it into copper, which is his laſt labour, whereby the copper is made malleable and vendible: which done, the Chymiſt coming, tries another ſeparation, by whoſe help gold and ſilver is extracted, as yet tryed of very few, of which mention is here made.

Paracelſus

Paracelſus alſo ſaith in the ſame plaee, that God hath given ſome an eaſier way of ſeparating gold and ſilver from courſer metals, and indeed without refining the oar, which is a ſpecial aud curious Art, which he teacheth not in plain tearms, but only ſaith it is ſufficiently taught in ſeven rules of that book, where he treats of the nature and propriety of metals; in which you may ſeek it. And this purification of courſer metals I count moſt eaſie, which I have often tryed in ſmall quantities: and I doubt not but God hath ſhewn other Artiſts alſo other purifications by which imperfect metals are perfected; for example, if one would purge the fruit of the earth by diſtillation, ſo that the dregs and impurities being taken away, it would grow up with a new clear clarified body: as if one diſtil black and impure Amber by a retort, the ſeparation would be made by Fire, of the water ſavouring of an *Empyreum*, of the oyl and volatile ſalt, and the *Caput mortuum* be left in the bottom of the retort; by which means, in a very ſhort time without great labour, is made a great alteration and emendation of Amber, though the oyl be black, impure, and ſtinking: but if it be again diſtilled by a retort with ſome mundifying water, as with the ſpirit of ſalt (namely through a freſh clean glaſs retort) there will be made a new ſeparation by that ſpirit of ſalt, and a far clearer oyl will be extracted; the dregs with the ſtink left in the bottom of the retort, which afterward may be twice or thrice rectifyed again with freſh ſpirit of ſalt, until it get the clearneſs of water, and ſweetneſs of ſent reſembling Amber and musk.

c. of Amber rectified

And this tranſmutation makes of a hard thing, a ſoft; unlike the former in ſhape, which though never ſo ſoft and liquid, oyly, may again be coagulated, ſo that it becomes as it was at firſt, after this manner following. Take the ſaid oyl very well clarifyed, add to it freſh ſpirit of ſalt, ſet it in digeſtion, and the oyl will attract from the ſpirit of ſalt, ſalt enough for its own recoagulation, and again it acquires the hardneſs of Amber, of an excellent clear and admirable colour; of which half an ounce is worth more than ſome pounds of black Amber; of which ſcarce the eight or tenth part remains in purifying, all the foul ſuperfluities caſt away.

By this means I think one may cleanſe and mend black metals, if ſo be the manner of their cleanſing were known by diſtillation, ſublimation and recoagulation. But thou ſay'ſt that metals cannot like vegetables be purified by force of diſtillation, to which I preſent our firſt furnace not given to peaſants, but Chymiſts, purifying metals; ſo alſo the poſſibility of their perfection is ſhewn by help of fermentation. For as freſh leaven can ferment the vegetables juices, which are perfected by fermentation, the dregs being caſt away as one may ſee in wine, ale, and other liquors, whoſe laſting and perfection proceeds from no other thing but fermentation purifying the vegetable juices, without which they could not otherwiſe withſtand the Elements, ſubject to corruption in a very ſhort time, which fermented laſt ſome years: ſo alſo if we knew the proper ferment of metals, ſurely we might refine and perfect them, ſo that they not being any more ſubject to ruſt, would be able to prevail againſt fire and water, and be nouriſhed and fed by them. For ſo the world heretofore periſhed with water, and ſhall at laſt periſh with fire, and our bodies muſt rot and be purified by fire before we come to the ſight of God. And thus far of the fermentation of metals, wherewith they are amended and perfected. Metals alſo are purify'd and amended like milk ſet on the fire; whoſe cream the better part (the ſubſtance of butter) in the top is ſeparation from the whey and cheeſe, and the hotter the place is, the ſooner the ſeparation is made even, ſo it is with the ſeparation of metals; where metals put into a Fitted hot place by themſelves without any addition of another thing (the metals being before reduced to a milky ſubſtance or curd) are ſeparated in time, by parting the nobler parts from the ignobler, opening a great treaſure: and as in winter time milk is hardly ſeparated with a weak heat; juſt ſo metals if not helped with Fire, as one may ſee in iron, which in a long time under the earth is turned into gold without Art. For often iron oar is found with golden veins very goodly to behold, ſevered from the courſe, earthy and crude ſulphur, by force of the central heat. And commonly in ſuch oar no vitriol is found, being ſeparated and bettered by its contrary. But a long time is required for that ſubterraneous ſeparation, which Art very ſpeedily performs; as is wont to be done with milk in winter when we preſently make butter of it, when we put it to the Fire to part the cream ſpeedily; which ſeparation is helped by the precipitation made with acid things, mortifying the urinous ſalt of the milk, by which means all principles are ſeparated by themſelves, as butter, cheeſe, whey: ſo in a quarter of an hour ſeparation is made by boiling, which elſe without acid things could not be done in ſome weeks. If then it be poſſible in vegetables and animals, why not in minerals? For what but gold and ſilver is found in lead, iron, tin and copper, though it doth not appear? Why is all goodneſs denyed to the courſer metals granted to vegetables and animals not equal to them for laſting? Whence is the natural perfection of lead, tin, iron, and copper to be proved? Nature ever ſeeks the perfection of her fruits; but courſe metals are imperfect; Why then is not nature helped with Art in perfecting them? But the bond of metallick parts is worth obſervation, which being broken, the parts are ſeparated. Urinous ſalt (as I may ſay) is the bond of the parts making milk, as of butter, whey, and cheeſe, which is to be mortifyed by its contrary acid for ſeparation. But in iron the parts are bound with a vitriolate ſalt, as with a bond, which is to be mortified with its contrary, urinous or nitrous ſalt for ſeparation. He therefore who knoweth to take away the ſuperfluous ſalt of iron, either by moiſt or dry means, doubtleſs ſhall have iron not ſoon ſubject to ruſt.

Fire alſo hath incredible force of it ſelf in changing metals. Is not ſteel made iron by force of Fire, and iron of ſteel by different proceeding? Experience dayly teacheth us alſo divers kinds of changes and refinings by Fire; why is it not poſſible in metals by an expert Chymiſt having skill in them? Who would believe that a live bird lurks in an egg, and an hearb having leaves, flowers, and odour, in the ſeed? Why may not then abortive metals, getting not yet perfection, be perfected by Art, with help of Fire? Is not an unripe apple or pear ripened by the heat of the Sun? Which ſome curious and induſtrious men obſerving, have imitated nature in their works; and have found ſome metals not deſtroyed with the heat of Fire, but enriched with a ſecret gainful heat; ſo that melted (digeſtion being made) they have yielded double weight of gold and

ſilver. Yea I my ſelf have ſeen the common oar of lead digeſted after the aforeſaid manner, which was not only inriched with ſilver thereby, but alſo partaked of gold which it wanted before in ordinary tryal. Beſides one might work this in great quantity, as with an hundred pounds; which work of minerals will without doubt bring great profit to the skilful triers of lead: But know this, that not every tryal of lead will be furniſhed with gold, but the oar to be ever enriched with ſilver, experience being witneſs.

Many ſuch things are found in Nature incredible to the ignorant, and thoſe that are unexerciſed. But if we mortals were more diligent in reading the book written with the hand of God in the pages of the four Elements, ſurely we ſhould Find more ſecrets and wonders in them, but skill and wealth is got with ſweat of face and not by ſloth; therefore *labour* and *pray*. Metals are alſo meliorated by the help of gradation like to germination.

For it is well known, that the ſhoot or graſs of ſome fruitful garden-tree implanted in a wood, makes that tree afterwards to bear not wild fruits, but very good and ſweet like them of the implanted ſhoot, as one may ſee in iron diſſolved in an acid ſpirit, fermented with Venus and turned into Copper: by which means doubtleſs copper is turned into ſilver, and ſilver into gold, if the true manner of fermentation were known.

Now this tranſmutation is like digeſtion, making beef or horſe fleſh of graſs in the ſtomach of oxe and horſe, and mans fleſh of beef, in the ſtomach of man.

The better parts alſo are ſeparated from the worſer by the attractive ſtrength of the like, as is to be ſeen in a metal abounding with ſulphur, to which if iron be added in fuſion, the ſulphur deſerts its native metal, (by which means it is more purifyed) and joins its ſelf to the iron, with which it hath more affinity and familiarity, than with its own metal; for example, if iron be added to lead oar full of ſulphur in the melting, this melted metal is made malleable, which elſe would be black and brittle. And if ſomething elſe to be put to the melted malleable metal were known to us, to take away in the melting, the redundant, crude, combuſtible ſulphur, queſtionleſs it would yet be made purer; which thing being unknown, metals remain in their impurity. And indeed God hath done well in this as in all other his works, that he hath concealed his knowledge from us: for if it were known to the covetous, they would buy up all lead, tin, copper and iron, to turn into gold, ſo that rurall and poor Labourers could hardly buy metallick inſtruments for their uſe, for the ſcarcity; but God will not have all metals turned into Gold.

A Similitude of taking away the ſuperfluous ſulphur of ſome metals in fuſion, being given to keep the purer parts; ſo likewiſe is there another manner of ſeparating, the purer parts from the impure, namely, by the attractive power of the like, where the purer parts are drawn together by their like, the impurer and heterogeneous part is rejected: and that may be ſhown as well by the moiſt as dry way: an example of the moiſt way followeth.

If quick Mercury be added to impure gold or ſilver diſſolved in its proper *menſtruum*, the mercury draws to it ſelf the inviſible gold and ſilver from the *Menſtruum* and mixt impurity and aſſociates what is pureſt to it ſelf, which ſeparation ſwiftly ſucceeds. Mercury performs the ſame likewiſe in the dry way: namely, when ſome earth having ſome gold and ſilver, is moiſtned with acid water, and they are ſo long bruiſed together, till the Mercury draws the better part; which done you muſt waſh the dead earth left, with common water, and ſeparate the Mercury being dryed from the attracted gold and ſilver, by trajecting them through a skin, but the Mercury draws but one metal from the earth, and indeed the beſt at one time; which being ſeparated, it draws another metal; for example, if in ſome one earth, gold, ſilver, copper and iron ly hid, the firſt time the mercury draws the gold, the ſecond the ſilver, but copper and iron hardly by reaſon of their droſs, but tin and lead eaſily, but eaſieſt of all gold by reaſon of its purity like to mercury.

Another Demonſtration by the dry way.

Put under a tile a cuple with lead, to which add a grain of very pure gold, moſt exactly weighed (for memories ſake) make the gold in the cuple to fulmimate, and the lead will enter the cuple, the gold being left pale in the cuple: of which pale colour there is no other cauſe than the mixture of ſilver, drawn from the lead by the gold. But thou wilt ſay, that thou knoweſt this, that gold fulminated with lead, is made paler and weightier, by reaſon of the ſilver in the lead, left with the gold in the trial, augmenting the weight, and thence making it pale: to which I reply, though lead leave ſome ſilver in trying in the cuple, mixt with the gold added to it, augmenting its weight, and changing the colour; yet it is proved by the weight, that lead leaves more being mixt with gold in the cuple, than when tryed without gold. Hence it is proved, that gold in the fire draws its like from other metals, augmenting its weight: and this alſo gold doth in the moiſt way: for if it be diſſolved in its own *menſtruum*, together with copper, and put in digeſtion, and then ſeparated, it attracts gold from the copper; which labour, though not done with profit, yet witneſſeth a poſſibility. But if the *menſtruum* of gold augmenting the attracting power of gold or multiplying the ſame were known, but diminiſhing the retentive power of copper, doubtleſs ſome gain were to be expected; and indeed more, if gold and copper, together be melted in fire with the dry mineral *menſtruum*; by which means the weight of gold would be increaſed according to *Paracelſus* ſaying Metals mixt together in a ſtrong fire, continued a pretty while, the imperfection vaniſheth and leaves perfection in its place.

Which ſurely well done, is a work not wanting gain. For I freely confeſs, that I would ſometime incorporate ſilver with iron, when as gold from iron gave me a good increaſe of pure gold, inſtead of fixt ſilver ſought after. And by this means often ſome not thought on thing happens to Artiſts, as to my ſelf with fixt ſilver, not rightly conſidering the buſineſs. Therefore medling with metals, be ſure when you find ſome encreaſe, to weigh well what it was at firſt. For many think long trying ſilver with iron, by the Blood-ſtone, Load-ſtone, Emraud, *lapis calaminaris*, Red-talck, Granats, Antimony Arſenick, Sulphur, Flints, *&c.* having ma-

ture

ture and immature, volatil and fixt gold in them, finding in the trying good gold; that this gold is made of the ſilver by the help and uſe of the foreſaid minerals, which is falſe, For the ſilver drew that gold out of thoſe minerals, in which before it lurked volatile. Yet I deny not the poſſibility of changing ſilver, as being inwardly very like gold, but not by help of cementation with the ſaid minerals, becauſe that gold proceeds not from the ſilver, but thoſe minerals, attracted by the ſilver. This labour is compared to ſeed caſt into good ground, where dying, by its own power it draws its like to it ſelf, whence it is multiplyed an hundred fold.

And it behoveth in this work now and then to wet the metallick earth, with proper metallick waters, being dryed up with heat (which operation is called of the Philoſophers inceration) elſe the earth will be barren, and it behoveth that this water be neer in kind to the earth, ſo that when they are united they yield a certain fatneſs. For as it appears from ſandy dry earth, moiſtened with rain water, not bringing forth fruit agreeable to its ſeed, for the ſmall heat alſo of the Sun conſuming the moiſture, and burning the ſeed in the earth, which mixt with cows dung or other, keeps the water ſo as that it cannot be ſo ſoon conſumed. By the ſame reaſon it is neceſſary that thy earth and water be mixt, leſt thy ſeed be burnt up. Which work if well handled, it will not be in vain, requiring the exceeding diligence of nouriſhing the earth with warmth and moiſture, when the earth is drown'd with too much moiſture, or hath too little, it cannot increaſe, and this is one of the beſt labours, with which I draw forth good gold and ſilver of baſer metals, requiring the beſt veſſels, retaining the ſeed together with its earth, and water in its proper heat. I doubt not but this work alſo in a greater quantity, may be performed, firmly beleiving that the courſer metals, eſpecially lead, the fitteſt of all not only to be perfected into gold and ſilver, but alſo into good medicine: which without queſtion is a Philoſophick labour granted from God, as a great comfort to the Chymiſt, but warily to be uſed. For that all and ſingular Gods gifts he will not have common: as indeed I have found, when I had invented a very excellent work, that I ſhewing it to a friend, neither could I afterwards teach it to him, nor do it again for my ſelf. Therefore indeed juſtly men are doubtful in writing ſuch matters: for many ſeek with idleneſs to get the inventions of others, performed with great coſts and labour. Therefore it is ſafer to be ſilent and give leave to ſeek, than to publiſh ſecrets, that they may undergo the pains and charges to be born in inventing high matters; nor any more hereafter may the ingrateful ſo impudently gape after others Labours. Therefore I would entreat all men both of high and low degree, that they would not moleſt and tire me hereafter with their Petitions and Epiſtles, and that they would not turn my good will of benefiting others to the ruin of my ſelf, but be contented with my writings publiſhed for the profit of my neighbour. Nor do you think that I poſſeſs and promiſe golden mountains. For what I have written, I have writ to diſcover nature, in theſe diſcourſes of the perfection of courſe metals in ſmall quantity; For I never made trial in a great quantity, trying truth and poſſibility in a leſſer only, in ſmall crucibles: therefore thoſe things which I have writ are written to that end that the poſſibility of the Art, may appear, of perfect metals to be wrought out of Imperfect, therefore he who hath occaſion may make trial in a greater quantity: but as for my part wanting opportunity, I expect Gods bleſſing, whereby upon occaſion I may make tryal in a greater quantity, and ſo receive the fruit of my labour and great charges.

Alſo metallick bodies are tranſmuted by another means, namely by the benefit of a tinging metallick ſpirit, as one may ſee in *aurum fulminans*, ſometimes kindled upon a ſmooth clean metallick plate, fixing a very deep golden tincture upon the plate, ſo that it may bear the Touch-ſtone. The ſame alſo happens in the moiſt way, where plated metals put into a gradatory ſpirit made of Nitre, and certain minerals, being pierc't by the ſpirit, obtain another kind agreeing to the ſpirit. But if one doubt of the metallick gradation, made with *aurum fulminans*; he may try the certainty from the often fireing of freſh *aurum fulminans*, upon the ſame plate; for he ſhall ſee that it is not the colour of the metal, and outwardly gilded, but deeply tinged. Likewiſe one may try the certainty by a humid ſpirit, if the transformed metals are tryed, whence the mutual action and paſſion of ſubtilized ſpirits plainly appears, for the power of ſpirits is very great, and incredible to one not exerciſed; and this gradation of inferiour metals, Philoſophers both ancient and modern, doe not only confirm, but alſo diggers of minerals taught by experience, that mineral vapours by penetration change courſer into purer metals, *Lazarus Ercker* being witneſs, that iron is changed into a good natural copper in green ſalt waters, & that he ſaw a pit, in which iron nailes and other things caſt in, by the penetration of a cupreous ſpirit were turned into a good copper. I do not deny that metallick diſſolutions of ſome metals do ſtick precipitated to the plates, and to make them of a golden, ſilver, or cupreous colour; for it is well known, that iron caſt into a vitriol water not to be turned into copper, but to draw copper out of the water, of which thing we treat not here, confirming the poſſibility of metallick tranſmutations by a tinging and piercing ſpirit; therefore I again maintain that great power is in metallick ſpirits; look only upon courſe and opake earth, and beſides that clear and limpid water with which the clearer and more powerful air proceeding from the water cometh from the earth. Are not whole Countries drowned with water, ſometimes Towns and Cities taken away? Cannot the air deſtroy the ſtrongeſt Houſes; eſpecially ſhut up in the Earth, ſhake the Land for ſome miles, and afterward demoliſh whole Cities and Mountains with the death of Men? all which things are done naturally. Wind artificially raiſed by Nitre threatens a far greater danger, which no man can deny. Although that corporeal Elements exerciſe ſo great power, yet they cannot pierce metals without hurt, nor ſtones and glaſs, and things ſoon penetrated by fire. Therefore not by an occult but a manifeſt power of Sun and Fire, which it hath over metals, ſtones and glaſs, which are eaſily pierc't by them without any impediment: and why ſhould not metals compact of a certain metallick ſubtile and piercing ſpirit be penetrated by help of fire, and changed into another ſpecies? As is already ſpoken of *Aurum fulminans* and *aqua gradatoria*. Therefore there is no doubt of the poſſibility of the metallick tingent ſpirit changing courſer metals into finer, both by the dry and moiſt

way; For Metals may be purified the ſame way as Tartar and Vitriol, and other ſalts, namely by the benefit of much water. For it is manifeſt that vitriol is purged with iron and copper mixt with it, namely diſſolved and coagulated in much water, ſo that it waxes as white as allom; which purification is but a ſeparation of the metal from the ſalt, made by the benefit of much water debilitating the ſalt, ſo that it cannot longer retain the mixt metal, which is precipitated like ſome ſlime, not unprofitable, becauſe the chiefeſt part of the vitriol, from which is the greenneſs, *viz.* Copper, Iron, and Sulphur. And as by help of ſeparation metals are drawn from vitriol, more perfect than ſalts; ſo alſo it is with metals when the perfecter and better part is ſeparated by help of precipitation: as for Tartar, it is purified by the addition of water, but its better part is not precipitated as in vitriol, but the courſer part which is its blackneſs and fæculency. As for example; Common Tartar by the often ſolution (made with a ſufficient quantity of water) and coagulation is made very pure and white, becauſe in every ſolution made with freſh clear water, it always becomes purer; and not only by this means white Tartar, but alſo red and feculent, is reduced into tranſparent cryſtals, and indeed very ſpeedily by vertue of a certain precipitation; whoſe limoſity is the cauſe of the obſcurity of the cryſtalline ſalt of tartar, and is nothing elſe but an unſavory thing, dead and uſeleſs, mixt with the tartar in its coagulation in Hogs-heads of Wine, and ſeparated again by power of ſolution.

And theſe examples of the two ſalts of Vitriol and Tartar, are not in vain ſet down, becauſe they ſhew the difference in precipitation: For in ſome Metals, by force of precipitation, the courſer part is ſeparated; but in other, the better and choicer, according to the prevalency of this or that part.

In Vitriol, the better part (Copper and Iron) is the leaſt, which is precipitated and ſeparated from the courſer and greater part, *viz.* Salt; But, in Tartar, the courſer and leſs part is precipitated and ſeparated from the greater and better part clarify'd: The like is in Metals. Therefore, let every one be wary in ſeparating; and conſider before, whether the better or courſer part of the Metal is to be precipitated; without which Knowledge, no Man can meddle with this Buſineſs. Let alſo the Workman be ware, who expects any profit from his labour, of Corroſive Waters; as *Aqua fortis*, *Aqua Regia*, Spirit of Salt, Vitriol, Allom, Vinegar, *&c.* in the Solution from which no Good proceeds, as utterly deſtroying and corrupting all and each of them; proving the ſame in theſe words, *From Metals, by Metals, and with Metals, Metals are made perfect.* Metals are alſo purified, maturated and ſeparated from their Vices, by Nitre burning up the ſuperfluous Sulphur.

And all the aforeſaid perfections of metals are but particular. For every particular medicine, as well humane, as metallick, purgeth, ſeparateth and perfecteth or amendeth by the taking away the ſuperfluity. For a univerſal medicine worketh its perfections and emendations, by ſtrengthening and multiplying the radical moiſture as well of animals as metals, expelling its enemy by its own natural vertue. But thou ſayſt excellent examples indeed are delivered by me, but not the manner of doing them. *R.* I ~~have~~ delivered more then you think, although you don't perceive it; for I am ſure after my death that my books will be in greater eſteem, from which it will appear that I have not ſought vain glory, but the profit of my neighbour to the utmoſt of my power. But do not, ſeeing my freeneſs of writing, think that you may wreſt many things from me. For aſſure your ſelf, that although I have written many things for the publick good, yet I intend not by this means to trouble my ſelf. For I cannot ſatisfy the deſires of all men, nor anſwer their Epiſtles, nor inrich all men, who neither am rich my ſelf, nor have ſought riches. For although I have gotten the knowledge of theſe things by Gods bleſſing, and have tryed the truth of it in ſmall quantity, yet have I never made experience in great ſtore for wealth ſake, being contented with Gods bleſſing.

And let this ſuffice concerning the ſeveral purifications of metals according to my experience; as for that univerſal medicine ſo famous, I cannot judge of it, being a thing unknown to me; but the poſſibility thereof I am forc't to affirm, being moved with the ſeveral tranſmutations of metals; which being unknown, it behoves us to be contented with that favour which God hath beſtowed on us. For oftentimes queſtionleſs it is better to know little, for Eternal Salvations ſake; for moſt commonly wealth and learning puff up. And pride brings to the Devil the Author of it, from whence God of his mercy preſerve us.

Of the Philoſophers Stone.

I Have undergon much charge and labour for many years, to extract the tincture or anima of gold, for a medicine to be made therewith, which at length I have obtained, where I have obſerved the remainder of the gold, the ſoul or better part being extracted to be no more gold, nor longer to endure fire. Whence I conjectured, that ſuch an extraction being fixt again, can perfect courſer metals and turn them to gold: But I could not hitherto try the truth of my conceived opinion living at this time in a forraign place; therefore againſt my will, although greedy of novelty, I have been forc't to abſtain from the work. In the mean time conſidering the opinions of the Philoſophers concerning their gold, not the vulgar, aſſerting the univerſal medicine to be prepared therewith. I have again affuſed a certain Philoſophical Vinegar to Copper for to extract the tincture, where almoſt all the Copper like whitiſh earth is ſeparated from the tincture in digeſtion, which earth by no Art I could again reduce into a metallick body.

Which experiment again confirmed me of a poſſibility of this Medicine. Which labour though I never followed, yet I doubt not but an humane medicine, though not alſo a metallick is attainable thence by a diligent workman. The ſoul therefore with all the metallick attributes, conſiſting in ſo ſmall a quantity, which is ſcarce the hundredth part of the weight, which being extracted and ſeparated, the remaining body is no more a metal, but a uſeleſs and dead earth; but it is not to be doubted but being fixt again, it may reaſſume and perfect another metallick body. Therefore I am confidently perſwaded by the aforeſaid Reaſons, that ſuch a medicine is to be made of mineral and metallick things, *viz.* in the flowing, changing baſer metals into better. But do not think that I writing theſe things make gold or copper the matter of this medicine, which I do not hold, well knowing that there

there are other ſubjects eaſily to be handled, abounding with tinctures.

So thou haſt heard now my opinion of the Univerſal Medicine, which my experience in Gold, Copper, and other Minerals and Metals hath cauſed: which I will not preach for *Goſpel*, becauſe it is human to erre.

Therefore no certainty is to be had, before its final and compleat perfection, and indeed once or twice tryed for certainties ſake. For an excellent way once found out, cannot alwaies be often repeated, which happens doubtleſs as well to others as to me. Therefore we muſt not triumph before the Victory; for unthought on impediments may fruſtrate Hope: but God is rather to be implored in our labours, that he would be pleaſed to bleſs our endeavours, that we may uſe well his gifts in this life as good ſtewards, and afterward beſtow the free reward of our labours, watchings, and cares on us ſinners, namely, everlaſting Reſt and Salvation out of his meer Mercy.

Whether Minerals, as Antimony, Arſenic, Orpin, Cobolt, Zinck, Sulphur, &c. may be tranſumuted into metals, and into what?

IT is long ſince debated among Chymiſts, whether the aforeſaid Minerals proceed from the ſame principles with Metals, and whether to be counted Metals; in which Controverſy they have not agreed to this day, when as one approves that which another denies; ſo that a ſtudent of Chymiſtry knows not to what ſide he had beſt aſſent.

But this knowledge not a little helping, concerning the purifying of metals, I would put my opinion alſo grounded upon experience, for the ſatisfying the doubtful, the ſimplicity of them is ſtrange who hold not one and the ſame beginning to be of minerals and metals, ſaying, if metals might be made by nature, of minerals ſurely it had long ſince been done; but it never was, experience witneſſing; for remaining minerals, they are never tranſplanted into metals. I Anſwer, metals grow one way, alſo vegetables another, ſoon budding, and again ſoon dying; but it is not ſo with metals; for all laſting things have long time of digeſtion, according to the ſaying, *That which is ſoon made, doth ſoon fade*; this is to be underſtood not only of vegetables and minerals, but alſo of animals, as appears from the budding of ſome vegetables, coming in ſix Months ſpace to their perfection, and then again periſhing: when as things requiring longer time of digeſtion and perfection are much more laſting. A Muſhroom in the ſpace of one or two nights grows out of rotten wood, again ſoon vaniſhing: not ſo the Oke. Oxen, and Horſes in the ſpace of two or three year come to perfection, ſcarce living the twentyeth, or twenty-fourth year: but a Man requiring twenty four years to his perfection, lives ſixty, eighty, or an hundred years. So alſo we muſt conceive of laſting metals requiring many ages, and alſo very long time of digeſtion and perfection; metals therefore requiring a very long time of digeſtion to their perfection, it is granted to no man ever to ſee the beginning, and end of them; the tranſplantation of minerals into metals by nature cannot be denyed; eſpecially, becauſe that in the oars of metals, eſpecially of courſe ones, minerals are alſo found; wherefore diggers of minerals, when they find them, conceive good hopes of finding metals, of which they are termed the *Coverlids*, for ſeldom metals are found without minerals, or minerals without metals; nor alſo are ever minerals found wanting gold or ſilver; therefore minerals are properly termed the *Embryo* of *Metals*; becauſe by art and fire a good part of gold and ſilver is drawn out of them by fuſion; which if they do not proceed from the metallick roots, whence proceeds that gold and ſilver? For an Ox is not born of an Infant, nor a man of a Calf; for alwaies like is produced of its like.

Therefore minerals are counted but unripe fruits in reſpect of metals, not yet obtaining their ripeneſs and perfection, nor ſeparated from the ſuperfluous earth; for how ſhould a bird be hatcht of an egg by an heat, not predeſtined for the generation of a bird? For ſo we muſt underſtand of minerals, which if they be deprived of their metallick nature, how ſhould by fire metals be produced from thence? But thou ſaiſt that thou never ſaweſt the production of perfect metals out of courſer; therefore that it is neither likely, nor credible to thee, to whom many things as yet lye hid, as from moſt men, perverſly and fooliſhly denying things unknown; for daily experience witneſſeth, that the viler minerals and metals by taking away the ſuperfluous ſulphur (however it be done) obtain a greater degree of perfection, therefore ſhould not thy heart believe, and thy tongue ſpeak what thou ſeeſt with thine eyes? For experience ſhews that good gold and ſilver might be drawn out by art almoſt out of all courſe minerals and metals, yet more out of ſome than of others, and ſpeedier; for there is not that dark night, that is altogether depriv'd of light, which may not be manifeſted by a hollow glaſs; nor is there an element (though never ſo pure) not mixt with other elements, nor any malignity depriv'd of all good, or on the contrary. And as it is poſſible to gather the hidden beams of the Sun in the aire, ſo alſo hidden perfect metals diſperſed in imperfect metals, and minerals by fire, and an expert Artiſt: if once they are placed in fire with their proper ſolvents, where the homogeneous parts are gathered, and the heterogeneous ſeparated; ſo that there is no need to go into the *Indies* to ſeek gold and ſilver in thoſe new Iſlands, which is poſſible to find plentifully here in *Germany*, if ſo be the merciful God would pleaſe to turn away thoſe preſent cruel Plagues, and bring them out of old metals, *viz.* Lead, Iron, Tin, and Copper, there left by the Dealers in minerals; indeed without the culture of minerals. Let no man therefore judge himſelf to be poor, becauſe he is only poor and in want (although otherwiſe very rich and abounding in wealth, which yet in a moment he is forc't to forſake) that being ungrateful, neither knoweth nor acknowledgeth God in his Works.

What I pray is in leſs eſteem in the world, than old Iron and Lead, which are acceptable to the wiſe to uſe in the Lotion of Copper and Tin with the mineral White? But how they are to be waſhed, is a difficulty to the unexerciſed in the fire, and ſhall be delivered by ſimilitudes: You ſee Antimony freſh digged out of the earth, very black and impure; which by fuſion ſeparated from its ſuperfluity (which, though nature gave to it not in vain, but as an help to its purification, according to that: *GOD and Nature do nothing in vain*)

vain) is made more pure, and endowed with a body nearer to metals than its mineral, which if afterwards melted with ſalt of Tartar, the crude and combuſtible ſulphur is mortified thereby, and is turned into droſs, and ſeparated from the pure mercurial part, ſo that hereby is made a new and freſh ſeparation of the parts, of which one portion being white and brittle, ſinks to the bottom, the other lighter, to wit, the combuſtible ſulphur is on the top with the ſalt of Tartar; which poured out into a Cone, when they are cold, may be ſeparated with the hammer; the inferior part of which is called by the Chymiſts *Regulus*, which is purer than Antimony caſt the firſt time out of its mineral; and this is the uſual purging of Antimony uſed by Chymiſts; to which (*Regulus*) if afterward any thing ſhould be added, for a third purification, without doubt it would not only be made purer but more fixt and malleable. For if white *Regulus* be preparable out of black Antimony, why not as well malleable metal out of the *Regulus*.

Another way of ſeparating the ſuperfluous Antimonial Sulphur,

℞ ANtimony powdred one part, Salt-peter half as much, mingle them, and kindle the mixture with a live coal, and let that Antimonial ſulphur, with the nitre be burnt up, the darkiſh maſs being left, to wit, of a brown colour; which melted for the ſpace of an hour in a ſtrong fire yeilds an Antimony like to that which is made with ſalt of Tartar, but ſomewhat leſs in quantity: in like manner the parts of Antimony are ſeparated, *viz.* if Antimony, Nitre, and crude Tartar be mingled in an equal weight, and being mixt are kindled and melted. There is alſo another ſeparation of the Antimonial parts; when of ſmall bits of Iron one part is put into a ſtrong crucible, in a wind Furnace, to which being red hot, caſt two parts of ground Antimony, for fuſion, and the ſuperfluous combuſtible ſulphur will forſake the Antimony, and joyn to the Iron, a metal more amicable to it; mixt with which, it forſaketh its own proper pure Mercury, and ſulphur or *Regulus*, which is almoſt the half part of the Antimony.

And theſe four ways, by which the ſuperfluous combuſtible ſulphur of Antimony is ſeparated are moſt common, not ſet down as ſecrets, but for demonſtration ſake, that it may appear how ſulphureous minerals are, to be perfected and purified, which are little amended; yet ſhewing a better way not only for Antimony, but alſo for Arſenick and Orpin, although theſe two cannot be ſo done with Iron, Nitre and Tartar, by reaſon of their volatility; but with Oyl, or other fat things in cloſe crucibles, giving a *Regulus* like to the Antimonial; and theſe *Reguli* make Tin hard, to ſound and be compact; if to one pound one ounce be added in fuſion, for making good houſhold ſtuff. And in tryal they give good Gold.

And as it is ſaid of purging Antimony, ſo alſo it is to be underſtood of the reſt, as *Wiſmuth*, *Zinck*, *Lapis calaminaris*, Lead, Tin, Iron and Copper, to be purged from their ſuperfluous ſulphur, if thou wilt draw more perfect metals, *viz.* Gold and Silver out of them with gain. And ſo I make an end of metallick lotions; recommending to Chymiſts, *Nitre*, *Tartar*, *Flints* and *Lead*; for who knoweth to uſe them, ſhall not loſe his labour in Chymiſtry; but 'tis to be lamented, that every where good earth and fixt in the fire, is not to be gotten, retaining Lead and Salts; for without our old Saturn little or nothing can be done in refining metals; therefore who goes to try any thing in this Art, let him ſeek the beſt earth retaining Lead twentyfour hours ſpace; afterward let him conſult with Tin, what *Vulcan* has to be done with Iron; who will tell him what he muſt ſuffer, before he obtain the Crown.

Of the tincture of Sol and Antimony.

SOmetimes an alteration happens to mans body, from the the attraction of mineral vapors (which cannot be done by my Furnace) in the tryal; therefore here I will ſet down a certain medicine for the Workmans ſake, as well for preſerving as curing, namely, a clear rubin fixt, and ſoluble of Gold and Antimony. Take of pure Gold half an ounce, diſſolve it in *Aqua Regia*; precipitate the ſolution with liquor of Flints, as before is ſaid in the Second part; edulcorate and dry the calx, and it will be prepared; take *Regulus Martis* (of which is ſpoken a little before) beaten fine, to which mix three parts of the pureſt Nitre; place the mixture in the crucible between burning coals, putting to fire by degrees: which done make a ſtronger, *viz.* for fuſion; for then the Maſs will be made purple; which taken forth and cooled grind very ſmall, of which take three or four parts and mix with one part of the aforeſaid golden calx; place it mixed in a ſtrong crucible covered over in the aforeſaid winde Furnace, and make the maſs to flow together like metal, and it will aſſume the Antimonial Nitre in the fuſion, and will diſſolve the Gold or the calx of Gold, and a maſs of an Amethyſt colour will be made therewith, which ſo long leave in the fire, till it get the clearneſs of a Ruby, which one may try with a clean wire or iron bowed and put therein, although in the mean time the maſs deprived of fuſibility, is thickened; it is meet to add ſome Nitre or Tartar, for ſpeeding fuſion, and that as often as ſhall be needful. Laſtly, pour the maſs, when it ſhall come to the utmoſt redneſs of a Ruby, hot into a clean copper morter, which there leave until it cool, and it will be in colour very like to an Oriential Ruby; then bruiſe it hot into powder, for taking air it would melt, and extract the tincture by the affuſion of the ſpirit of Wine in a Vial, and the Gold together with the Antimony will remain very white like the fineſt Talc, to be waſhed with clear water, in a glaſs, edulcorated and dryed; which melted with a ſtronger fire, gives a Yellow glaſs, in which no Gold appears, yet ſeparable by way of precipitation with the filings of Iron and Copper, from which it recovers its ancient colour, but without profit, by reaſon of the waſt, the tinged ſpirit is to be taken away from the tincture, which is a very ſoveraign medicine in may grievous diſeaſes.

Although thou mayeſt ſuſpect this not to be the ſimple tincture of *Sol*, but of Nitre and Tartar mixt, be ſure that the quantity of Nitre added not to exceed; and ſuppoſe that tincture of Tartar and Nitre, I pray what waſte is there? ſince that is ſo good a medicine by it ſelf, & I am perſwaded, this tincture of *Sol* to be better than thoſe ſet down in the Second part. That Ruby may be ſo uſed by it ſelf with proper vehicles, ſeeing it is a ſoveraign medicine of it ſelf; or elſe expoſed to the air and reſolved to a liquor; for the medicine is no leſs than a tincture, becauſe the

the Gold in it, and the purer part of Antimony are made potable without corroſives. Wonderful is the power of ſalts in metals to be deſtroyed, perfected and changed by fuſion; for it happened to me one time making this Ruby, placeing two other crucibles alſo with metals, by this containing gold with the prepared *Regulus* of Antimony (for eaſily two or three, or more crucibles may be placed in this furnace, to be ruled with one fire, which cannot be done in a common furnace by that means) about to put in a certain ſalt into the crucible next to the crucible of gold, that by a miſtake I caſt it into the crucible with gold only, whence ſo great a conflict aroſe, that there was danger of boyling over; therefore forced to remove it out of the furnace preſently with tongs, and to effuſe it, ſuppoſing that the Ruby was loſt by my raſh putting in of ſalt; therefore I would only ſave the gold. And I found the effuſed maſs red like blood, purer than a Ruby, but no Gold; but white grains like Lead diſperſed here and there in the ſalts, by reaſon of their ſmalneſs, not ſeparable but by the ſolution of the ſalts, which being ſeparated by the ſolution of water from the red tincture like blood, remained in the bottom of the glaſs, which afterward for fuſions ſake I placed in a new crucible in that furnace, but willing to try the fuſion, I found the crucible empty, and all the Gold vaniſhed, a little excepted ſticking on the top to the crucible and the cover, which I took away and melted for experience ſake in a new cloſe crucible, but all of it preſently feeling heat flew away like Arſnick, no ſign being left in the crucible; and ſo I was deprived of my Gold.

At length I took the red ſolution, and abſtracted the water from tbe ſalts, and I found the ſalt red like blood, which I put in a clean crucible in the furnace for to try whether any metallick body might thence be extracted; but I found the effuſed ſalt deprived of all tincture and redneſs, which ſeems ſtrange to me even to this day, that by help of this ſalt the whole ſubſtance of gold, *viz.* the tincture together with the remainder flew away, having ſo great volatility.

Which labour afterward I would reiterate, but it happened not ſo at all as at the firſt time; there was indeed ſome alteration of the gold made, but its volatilization was not ſo great, the cauſe of which thing, I think was the ignorance of the weight of the aforeſaid ſalt, caſt in at the firſt time againſt my will.

And two reaſons chiefly moved me to inſert this hiſtory, Firſt, that it may appear how ſoon one may miſtake in a ſmall thing fruſtrating the whole proceſs. Secondly, That the truth of the Philoſophers may appear writing that gold by art is reducible into a lower degree, equal to lead (which happened to me in this work) and that it is harder to deſtroy gold and make it like to an Imperfect metal, than to tranſmute an imperfect metal into gold; therefore I am glad in my heart that I ſaw ſuch an experiment; of which thing our phantaſtick Philoſophers will hear nothing, writing whole volumes againſt the truth, ſtifly affirming, gold to be incorruptible, which is an arrant lye; for I can ſhew the contrary (if need be) many ways. I wonder indeed what moves ſuch men to ſlight a thing unknown, I do not uſe to judg things unknown to me.

How dare they deny the tranſmutation of metals, knowing not how to uſe coals and tongs? truly I confeſs thoſe rude and circumforaneous Mountebanks, not a little to defile and diſgrace true Chymiſtry, every where cheating men by their fraud, being needy and oppreſt with penury; unleſs peradventure they find ſome credulous rich man giving them food and raiment for the conceived hope of Gain and Skill, of which alſo ſome being furniſht with gold, go clad like painted Parrots, whom I judg to be hated worſe than a Dog or a Snake; but innocent Chymiſtry is not therefore to be deſpiſed. Some covetous men beſotted with folly and madneſs, laying out their moneys with an uncertain hope of gain, who afterward the thing ill ſucceeding, are forced to live in poverty, whoſe caſe is not to be pityed, deſtroying their money out of covetouſneſs. Some ſeek wealth not out of covetouſneſs, but rather that they may have wherewith to live, and may ſearch nature, which are to be excuſed if they are deceived by knaves, yet not to be praiſed if they ſpend above their ability.

Another tincture and medicine of Gold.

DIſſolve gold in *Aqua Regia*, being diſſolved, precipitate it with liquor of the ſalt of flints, pour ſome more of the aforeſaid liquor to the precipitated gold, then place them in ſand to boyl for ſome hours ſpace, and the liquor of flints will extract the tincture of the gold, and be dyed with a purple colour; to which, pour rain water, and make it to boyl together with that purple liquor, and the flint will be precipitated, the tincture of an excellent colour with the ſalt of Tartar left; from which it is neceſſary to extract the water even to drineſs, and a very fine ſalt of a purple colour will remain in the bottom of the glaſs, out of which with the ſpirit of wine, may be drawn a tincture as red as blood, little inferior in vertue to potable gold; for many things lie hid in the purple ſalt, of which more things might be ſpoken if occaſion permitted; therefore let it ſuffice to ſhew the way of deſtroying gold, for that golden ſalt may in a very ſhort time, *viz.* an hour, be perfected with ſmall labour and tranſmuted into a wonder of nature; confuting the ſlanders of the noble Art of Alchimy; for which gift we ought to give immortal thanks to the immortal God.

Of Looking-glaſſes.

I Have made mention in the treatiſe of *Aurum potabile*, not only of the material heat of fire, but alſo of turning the fineſt beams of the Sun into a material bodily ſubſtance, by help of certain inſtruments by which they are collected. I have alſo mentioned there a concave Glaſs, whoſe preparation I will here give, it being not known to all men, the beſt that I know is as followeth. Firſt, patterns are to be made of the beſt matter, namely, hair and Potters clay, of which thing in the Fifth part, conformable to the glaſſes, in form and figure circularly round; for elſe they cannot gather the Sun-beams together, and again put them forth; the fault of which thing is to be aſcribed only to the pattern or mold; for the fuſion and poliſhing of glaſſes is no ſingular Art, being known even to Bell-founders, but to melt them when very well ſhap't of the beſt matter and rightly to poliſh them, this is Art: and firſt to cut the patterns round, being very well ſhaped by the uſe of a ſharp Iron Inſtrument cannot cannot briefly be demonſtrated; there-

therefore I will ſendthe Reader to Authors prolixly handling this thing, *viz. Archimedes* and *Johan. Baptiſt. Porta*, and others; but if thou wanteſt thoſe Authors, or doſt not underſtand them, ſee thou have a Globe exactly turned for making the Molds as followeth: firſt make a mixture of meal and ſifted aſhes, which ſpread equally between two boards, as the manner is to ſpread paſt made of Flower and Butter for Pyes and Tarts, anſwering in thickneſs to the glaſs to be ſhaped, then with a Compaſs make a circle as big a you pleaſe, which cut with a knife, and put it on the Globe, and ſprinkle quick lime on it out of a ſearce or ſive, and put clay well prepared with haire over it of the thickneſs of two fingers breadth; and if it be a great piece you muſt impoſe croſs wires ſtrengthning the Mold, leaſt it be bent or broken. Afterward one part being hardned with the heat of the Sun or fire, take away all that from the Globe, and put it on ſome hollow thing, on which it may on all ſides ſtand well, and alſo ſprinkle quick lime or the powder of coals on the other ſide, and put upon this the other part of the pattern, and again expoſe it by degrees, to be dryed by the heat of Sun or fire, leſt it crack; which done, take away the ends making thoſe parts of the Mold or pattern from the inward or middle, which ends ſet one againſt another to the inward parts, the diſtance at leaſt of a hands breadth, and put between in the top a few live coals to harden the Mold all over; to which put on other coals, and then more, and ſo by degrees even to the top, that they may be well kindled in their lighter parts; but if the Molds are very thick, one fire will not ſuffice, but it will be neceſſary to add more coals, until they be throughly kindled in the inner parts; afterward, let the fire go out by degrees, that the types may grow cold, but not altogether, but ſo that you may touch them; and preſently beſmear finely the ſifted aſhes mixt with water, with a pencil, to ſtop up the chincks ariſen from the burning the hair, and for ſmoothing the types; then again make both parts (after thou haſt firſt framed a hole in them for a Tunnel) clean, being wary leſt any foul thing fall upon them; and carefully bind them together with iron or copper wier; and very well lute over the joining with clay prepared with hair; and put on an earthen Tunnel, and place the Mold in dry ſand up to the top: And thou oughteſt in the mean while thou burneſt and prepareſt the Mold, to melt the metallick mixture, that it may be poured into the hot Mold, the Metal being well melted, caſt in a bit of ſearcloath, which burning, pour out the melted Metal into the hot Mold, being wary leſt coals or ſome other thing fall into the crucible, and be poured with the Metal into the Mold, ſpoiling the glaſs; then let the glaſs cool of it ſelf in the Mold, if the matter do not moulder in the cooling: And if it ſhould moulder in the cooling, which indeed would leſſen it, it behoves that the caſt glaſs be preſently taken out of the Mold, and covered over with a hot earthen or iron veſſel, that it may cool under it, which otherwiſe, cooling ſhut up in the Mold not being able to moulder, is broke in pieces, but a little below you ſhall perceive, what be thoſe mouldering metals.

And this is the common way (and the beſt) of melting, if ſo be thou art exerciſed; there are alſo other ways; firſt, when molds are made of wood or lead, agreeing to the glaſs, to be impreſſed with ſand, or the fineſt powder of tyles or other earth, as is the cuſtome of copper-ſmiths; and this way only ſerveth for leſſer glaſſes.

The third way which is the beſt of all, but hardeſt to one not exerciſed, is as follows; make a waxen Mold with a Cylinder to be placed between two boards, as is aforeſaid of the firſt way, which put upon the globe for to ſhape it, and let it be hardned in the cold; then take it away, and ſpread over it the following mixture with a pencil; which ſee that it be dryed in the ſhadow, then apply potters clay, prepared with hair, the thickneſs of one or two fingers breadth; then take away the wax in manner following from the earth: make a round hole in the earthen mold with a knife, coming even to the wax; wich done, place it near a coal fire, the mold being bending down, and the melted wax will run through the hole, into which pour the hot (not burnt) metal, *&c.* that liniment which is anoynted on the wax muſt be very well prepared leaſt while the wax melt, it fall and melt away with the wax, nor let the wax pierce the earthen mold and ſpoil it. Now the liniment follows: Burn potters clay well waſht in a Furnace even to redneſs; afterward grind it and take away its fineſt part with waſhing of water, ſo that you may have an impalpable powder, which dry, and again burn with a ſtrong fire: after grind it with rain water and ſalt Armoniack ſublimed, upon a ſtone, as Painters uſe to prepare their colours, bring it to the juſt conſiſtence of a paint, and the mixture will be made; the ſalt Armoniack keeps that fine powder, leſt it melt away with the wax: and the prepared earth makes a tender and fine fuſion.

The metallick mixture for the matter of the Looking-Glaſs.

THere are divers of theſe mixtures, of which one is alwaies better than the other, which by how much 'tis the harder, by ſo much the glaſs is the better; and by how much the harder the metal is, by ſo much the better it is poliſht; nor doth the hardneſs of the mixture ſuffice, but its whiteneſs is alſo required: for red proceeds from too much copper; black from too much iron, or duskie from too much tin, and doth not make the true repreſentations of things, but changeth the ſhape and colour of them: for example ſake, too much copper rendereth the Species redder than they are to be, and ſo of the reſt; let therefore the metallick mixture be very white; but if burning glaſſes are to be made, it is no matter what colour it be of, if ſo be that the mixture be hard. I will ſet down one of the beſt, ℞. of Copper plates the thineſt beaten to pieces one part, of white Arſnick a quarter part; firſt moiſten the plates with the liquor of the ſalt of Tartar, and make a Stratum ſuper Stratum, with plates and Arſnick powdred, by ſprinkling this on them, until the crucible be filled; to which pour the oyl of Linſeed, as much as ſufficeth to cover the copper and Arſnick; which done put on the cover with the beſt lute, then place the crucible (the lute being dryed) in ſand, ſo that only the upper part of the cover may ſtick out and adminiſter fire by degrees, at firſt little; ſecondly ſomewhat ſtronger, till at length it be hot, that all the oyl may evaporate; in the mean time, the oyl will prepare the copper, and retain the Arſnick, and will make it enter into the plates, like oyl piercing dry Leather;

ther: Or place the crucible upon a grate and put Fire to it, which adminiſter by degrees, until the oyl evaporate in the boyling. Laſtly, when it ſhall coole, break the crucible, and thou ſhalt find the copper of diverſe colours, eſpecially if thou ſhalt take Orpin in ſtead of Arſenick, and twice or thrice increaſed in magnitude, and brittle.

R. of this copper one part, and of latton [*Orichalcum*] two parts, melt it with a very quick Fire, and firſt indeed the latton, to which afterward add the friable copper; pour out the mixture melted and thou ſhalt have a very hard metal unfileable, yet not ſo brittle, but like ſteel, of which diverſe things may be formed ſerving in ſtead of iron and ſteel inſtruments; take of this hard metal three parts of the beſt tin without lead one part, melt and effuſe it, and the matter of looking-glaſſes will be made. This mixture is a hard white metal making the beſt looking glaſſes, but if this labor ſeem tedious, take of copper three parts, of tin one part, of white Arſenick half a part for the matter of looking-glaſſes, which are fine but brittle, as well in the melting as poliſhing, therefore carefully to be handled. I muſt here ſet down a thing worthy to be obſerved, and known to few; *viz:* a falſe opinion of many, eſpecially of thoſe who attribute knowledge to themſelves of the proprieties of metals. In the ſecond part (of ſubtile ſpirits) mention is made of the pores of metals, for experience witneſſeth, that thoſe ſubtile ſpirits as of harts-horn, tartar, ſoot, and ſometimes thoſe ſulphureous ones of ſalts and metals do evaporate through pewter veſſels, which at the firſt hearing every man cannot conceive, for whoſe ſake this diſcourſe is made. Make two balls of Copper, and two of pure Tin not mixt with lead, of one and the ſame form and quantity, the weight of which balls obſerve exactly, which done, again melt the aforeſaid balls or bullets into one, and firſt the copper, to which melted add the Tin, leſt much Tin evaporate in the melting; & preſently pour out the mixture melted into the mold of the firſt balls, and there will not come forth four nor ſcarce three balls, the weight of the four balls being reſerved; if then metals are not porous, whence I pray doth that great alteration of quantity proceed? therefore know that metals are porous more or leſs; gold hath the feweſt pores, ſilver hath more, Mercury more than that, Lead more than Mercury, Copper more than Lead, and Iron than copper, but tin hath moſt of all.

If we could deſtroy metals, and again educe them deſtroyed from power to act, ſurely they would not be ſo porous. And as a child without correction is unapt to any goodneſs, but corrected is endued with all kind of vertue and learning, ſo alſo we muſt underſtand of metals which left in their natural ſtate, namely drawn out of the earth without correction and emendation remain volatile, but corrupted and regenerated are made more noble, even as our bodies deſtroyed and corrupted, at length ſhall ariſe clarified before they come into Gods ſight. Well ſaid *Paracelſus*, that if in one hour metals were deſtroyed an hundred times, yet they could not be without a body, reaſſuming a new ſpecies and indeed a better, for it is rightly ſaid, *Unius corruptio, alterius generatio*; for the mortification of a ſuperfluous ſulphureous body is the regeneration of the Mercurial ſoul, for without a deſtruction of metals perfection cannot be; therefore metals are to be deſtroyed and made formleſs, that thereby the ſuperfluous earthy combuſtible ſulphur being ſeparated, the pure fine Mercurial ſpecies may ſpring forth. Of which thing more, when we ſpeak of Artificial ſtones.

Of the ſmoothing and poliſhing of looking-glaſſes

A Looking-glaſs, though it be very exactly melted and proportioned, yet is of no value if not rightly poliſhed and ſmoothed; for eaſily in the ſmoothing any part it may ſuffer ſome dammage hurtful to it, and it is neceſſary to take from them firſt, the groſſer part by the wheel, as the cuſtom is with Pewterers and Copper-ſmiths with a ſandy ſtone, then to apply to them a finer ſtone with water, until they are ſufficiently ſmoothed by grinding; which done, the looking glaſſes are again to be taken from the wheel and to be moved to the ſmall wooden wheel covered with leather, rubbed over with a fine prepared glazing ſtone until the creviſes contracted in the turning no more appear, having got a croſs line, afterward another ſmall wheel covered with leather is required, to which a blood-ſtone prepared and waſht with the aſhes of tin rubbed on, to which likewiſe by the aforeſaid means, according to the ſame line, the looking-glaſſes are ſo long to be moved till they get a ſufficient fineneſs and brightneſs. You muſt keep ſuch looking-glaſſes from the moiſt air, and breathing, and to wipe them when infected with air and breathing not with any woolen or linnen cloth, but with a Goats or Harts skin, and not any way, but according to the croſs line, with which the looking-glaſſes are ſmoothed. They may alſo be ſmoothed by lead artificially melted, by firſt rubing them with a ſmiris and water, and then with a finer ſmiris and lead; laſtly with a blood ſtone and aſhes of tin: likewiſe alſo with whetſtones, by changing for a finer every time, whence at length alſo they acquire a ſplendour by the aſhes of tin.

Alſo the outward part of the looking-glaſſes (convex) may be ſmoothed, which repreſents the ſpecies ſhort, and ſpreads the diſperſed rays: but the inward part (hollow) gathers and multiplies, and puts forth or expoſeth the Image.

Let theſe things ſuffice concerning the melting of looking glaſſes, & poliſhing requiſites, for the collection of the Sun beams, and although from the aforeſaid mixture other kinds of looking-glaſſes might be made repreſenting wonderful ſhapes and ſeveral excellent things, as Cylindrick, Pyramidal, Parabolick, *&c.* they are omitted as impertinent to this place, yet I could ſhew away to make them, becauſe I have undergone no ſmall labors and charges in the ſearching of their preparation and uſe, if it were neceſſary. But of all looking-glaſſes that is moſt uſeful whoſe preparation we have ſhewn, whoſe diameter is at leaſt two or three ſpans, if thou wilt perform any ſpecial thing; although it be but of one or two ſpans, yet it gathers abundance of beams, ſo that thou maiſt melt tin and lead with it, if it be well ſhaped: yet the larger are the better. Nor ought they to be too deep, that they may caſt their beams the further, and better perform their actions or functions, let them have the twentyeth or thirtyeth part of the ſphere (the ſection being exactly obſerved) which is the foundation of the Art.

Of Artificial Gems, and Metallick Glaſſes.

AS for metallick glaſſes pertaining to Alchymy, and much conducing to the perfection of metals, and eſteemed by the Ancient Philoſophers, I would not omit to ſay ſomewhat in this place, becauſe they are eaſily made by this furnace.

And indeed the Ancients have found theſe glaſſes queſtionleſs by chance, in reducing the calcined bodys into glaſs by a ſtrong fire, for very many ſecrets by this means not ſought for are found out. Oftentimes it happens to our labors, that paſt hope we find ſomthing better or worſe, than the thing ſought; and I think it hath thus happened with theſe glaſſes, but however it be, I am ſure theſe glaſſes have ſtood us in much ſtead; for *Izaak Holland* ſaith plainly, That vitrified metals being again brought to metals, by that reduction do give better and nobler metals than the firſt vitrified; and indeed gold gives a tincture, but ſilver gold, and copper ſilver; and ſo conſequently the glaſs of other metals give better metals in reduction, the truth of which experience proves, and although I have not yet made great tryal in this work, yet I know that metals brought into dead aſhes to be turned into clear glaſs cannot be again reduced into metals without great profit: yet one metal is more pliable than another, nor are our glaſſes the Artificial ſtones of gold-ſmiths fixed to other large ones for ornaments ſake, made by the addition of glaſs made of fuſile ſand; but ours are made of the juice of metals. But I do not deny the vertue of Venice glaſs, and others in the mundifying of metals, chiefly copper and tin, which yet is not comparable with metallick juices. I freely confeſs I have tryed this thing twenty times, and I never was deceived by it: but I know not whether it may prove ſo in a greater quantity, becauſe I never tryed it, doubting of my veſſels not fit to retain fuſible glaſſes a requiſit time: for I have ſpent much labor in making theſe kind of veſſels, but hitherto in vain. For there is very great hope of gain, if thou haſt very ſtrong crucibles, nor is this perfection of metals without reaſon, for whileſt the metal is burnt to aſhes, much of the ſuperfluous combuſtible ſulphur is burnt (as you may ſee in Lead, Tin, and Copper, from the ſparks appearing in their calcination whileſt they are ſtirred and ſeparating) which if again reduced (*viz.* being calcined) its better and heavier part (by benefit of melting) ſinketh to the bottom, the worſer flowing on the top is changed into droſs or glaſs. And ſo the ſeparation of metals is made by the help of the Fire alone, to the ignorant and unexpert incredible: but conſider gilt ſilver to be ſeparated in fuſion, which is as it were corrupted by the common ſulphur, and the metallick ſpecies, being loſt, it turns to a black droſs before that in melting it forſakes the gold: which way alſo ſilver is ſeparated from copper, and this from iron. Obſerve alſo that black and crude Antimony, being reduced into aſhes by calcination, and melted is ſeparated by a ſtrong Fire, the purer parts deſcending pure and white like ſilver, but the impure parts aſcending are changed into glaſs or droſs, which ſeparation would never be made without incineration although the Antimony ſhould have ſtood long influx.

Thou ſeeſt therefore the power of Fire alone in melting metals, wherefore believe thou that thy labor ſhall not be in vain if thou knoweſt how to help the Fire. Exerciſe thy ſelf therefore in it, for thou art ſufficiently inſtructed, and this furnace will help thee; without which it is impoſſible to manage ſuch things well, as experience teſtifies, confirming my words.

Mention being made of metallick glaſſes, which belongs to the perfection of metals, I am forced to ſay ſomthing alſo of other *Amauſa*, or coloured glaſſes, which are called Gems, and are worn for beautifying, which though it be not profitable, yet it is a delightful labour, which knowledge, as well noble as ignoble have long ſought, not for gain, but recreation ſake, erring from the true way (although prolixly deſcribed in many tongues) through ignorance of the art to render cryſtal or flint fuſible, and colouring it, being content with lead glaſſes made of one part of cryſtals, or flints, and three or four parts of minium or ceruſe, glaſs of no worth, as not only very ſoft and unapt for poliſhing, but alſo heavier than it ought by means of the lead, and having a yellow or green colour, for every glaſs made of cryſtal or flint, and minium or ceruſe by themſelves, *viz.* without the addition of other colours, gets a yellow colour from the Lead, hindering and altering other mixt colours; therefore a good ſtone is not made this way of lead and flint, but Leaden glaſſes of this ſort, Venice glaſs, Aſhes of tin, and colours being added to them, be uſed diverſly of the gold-ſmiths, namely to colour gold, otherwiſe of no moment.

Therefore I will give another preparation, namely out of flints *&c.* cryſtals alone without minium and ceruſe, with metallick colours, having the colour and elegancy of excellent ſtones; but not harder than glaſs; for although cryſtal is harder than iron, yet by melting it is deprived of its hardneſs in ſome meaſure, and is made like to glaſs, yet ſo much hardneſs reſerved, as ſerves to write on another glaſs, which glaſſes are eaſily poliſhed, and in all things and by all, moſt like, hardneſs excepted, to natural ſtones; with which not only various kinds of ſtones may be made, and other gold, ſilver, and wooden works or pictures adorned; but alſo diverſe ſupellectils, as ſalts, hafts or hilts, cups, *&c.* and alſo images and antiquities may be formed (by fuſion) like to thoſe cut out of gems by the hand of an ingenious workman, moſt delightful.

They are made after this manner: firſt you muſt look for flints and cryſtals not coloured, but very white, gathered out of ſand or ſtreams, which you muſt heat in a covered crucible, and quench them glowing hot in cold water, that they may crack and may be pulveriſed; otherwiſe they are ſo hard that when they are powdred, they take part of the morter and ſo are defiled; therefore it is worth your labor to handle them well. Afterward R of flints prepared, and the pureſt ſalt of Tartar, made in glaſed veſſels, but not in copper or iron, equal parts, mingle them and keep them for uſe.

And if thou wilt make this maſs into a gem, you muſt firſt mingle ſome colour (what you deſire) afterward ſo long place it (being put into a clean covered crucible ſcarce half full) in a very ſtrong fire, till all the ſalt of Tartar hath evaporated, and the flint together with the colour come into ſubſtance fuſible like glaſs: you muſt then put a ſmall clean iron wier, and draw out a little of the melted maſs for tryal; whether it have ſtood long enough in the fire, whether there be yet puſtles and little ſands, or whether it being

ing exactly melted, it ſhall deſcend to the bottom, which done, you muſt take off the crucible, and place it under ſome hot iron or earthen veſſel, that it may wax cold with the melted ſtone; otherwiſe the maſs will be broken in the crucible into very ſmall parts, and would be unfit for greater works: neither muſt you pour out the melted maſs for fear of the attraction of aire, and puſtles to ariſe thence. But being willing to make out of the Maſs by Fuſion, not Engraving Money or Images; there is no need to leave the maſs in the crucible to cool, but preſently to pour it out hot in a copper morter, and nothing will ſtick to the crucible, but all the maſs will be poured out without any waſte: And this maſs, if thou wilt, thou maiſt powder or break into very ſmall bits for fuſion and impreſſion. But the maſs when cooled in the crucible, is to be taken by breaking the crucible, and to be reduced into greater or leſſer ſtones by cutting: but melting for money or images; you muſt place the money or image, which you will imitate, with the backſide or hinder-part downward in an iron Ring, a Fingers breadth broad of greater capacity than the money, upon a ſtone or plain wood, and ſprinkle on a little Tripoly, or fine Sand, through a cloth, namely, as much as ſufficeth to cover the mold, and upon this to put more, well moiſtened with water, like aſhes of cupels, and to preſs it, being moſt tenacious, firmly to the mold, but warily, leſt the mold be moved; which done, you muſt turn the ring, and with a knife lift up the mold, and to take it, being lifted up with ones hands or tongs, the image being left in the ſand, to be dryed by heat of the Sun or Fire. Afterward to caſt the image, place the ring with the image impreſſed in the ſand under a tile, and adminiſter a ſtrong fire, that the whole ring, with the ſand, and the image in the ſand may be very hot: then take off the ring, to ſee if the image have ſuffered any loſs; which, if it have not, you muſt put upon it ſo much of the aforeſaid glaſs, courſly beaten, as ſufficeth in the fuſion to fill the image impreſſed on the ſand; which done, put the ring again under the tile, and adminiſter a fire of fuſion, till the glaſs melt in the ring; to which, touch with a ſmooth iron and light, (with a handle) being hot the ring being taken firſt out of the furnace with tongs, preſſing the glaſs well to the mold; and then place it under a hot iron, or earthen veſſel to cool; and being cold, take the image from the mold, which anſwers to it in all things, if thou haſt aright proceeded, exactly repreſenting the Carvers art, or a ſeal impreſſed on a jewel, which excellent work is moſt fit to feign, and repreſent Antiquities and Rarities.

The colouring of the aforeſaid maſs follows, by which it is made moſt like to Gems.

IT behooveth that colours be taken from metals and minerals, namely from Copper, Iron, Gold, Silver, Wiſmuth, Magneſia and Granate; of other colours I know nothing of certainty, Copper commonly makes a colour green like the Sea, Copper with Iron, graſs-green; Granate a ſmaragdine colour, Iron yellow or jacynth; Gold the beſt skie colour; Wiſmuth common skie colour; Magneſia Amethyſtine, mixt, they give other colours; E. gr. Gold mixt with Silver gives an Amethyſt colour; Iron and Copper, a pale green; Wiſmuth and Magneſia, a purple; Silver and Magneſia, various colours like an Opal.

Images are alſo made of divers colours, if the maſſes of diverſe colours be broken into bits and mixt, be put upon the Mold, *&c.* And if thou deſireſt an opac maſs (green, red, skie colour, *&c.*) add a little calx of Tin darkning, on which as on a Baſis the colours inſiſt. For example; in making a Turcoiſe ſtone or a Lazulus, mingle with the Azure made of the ſilver Marcaſit or Zafora (to colour the maſs) the calx of Tin, that they may melt together, and before the impreſſion be made, put upon the Mold ſome prepared gold, then ſpread and put upon this the aforeſaid glaſs; and the fuſion and impreſſion being made, will be made thence a ſtone having golden veins like *lapis Lazulus* very delightful; But there muſt be a *calx* of Gold not loſing its ſplendor in the fire, ſuch as is made by Mercury, or that which is better, which is precipitated out of *Aqua Regia:* of which above.

Of the preparation of the colours for colouring the maſs of Flints and Cryſtals.

THe plates of copper often heated, are to be quenched in cold water of which more in the Fifth part, from three to ſix grains of it may be mixed with ℥ j. of the maſs for a Sea-green colour. Iron is reduced into crocus by reverberation; of which from four to ten grains are added to the maſs for a yellow or Jacynth colour; Silver is diſſolved in *Aqua fortis*, and precipitated with the liquor of Flints after it is edulcorated and dryed, whereof from one to ſix grains, added to ℥ j. of the maſs, they make mixt colours.

Gold is diſſolved in *Aqua Regia*, edulcorated and dryed, precipitated firſt with liquor of Flints, whereof from grain four to ℈ *ſs.* mixt with one ounce of the maſs, make a moſt elegant Saphire. And if from three to ſix of that ſoluble ruby made of the Gold, and the nitrous *Regulus Martis* be added to ℥j. of the maſs, they make a very polite ruby: Magneſia pulveriſed, whereof, from ſix to fourteen grains, to ℥ j. of the maſs, make an Amethyſt.

Marcaſit diſſolved in *Aqua Regia*, precipitated with the liquor of flints, edulcorated and dryed, whereof from one to five grains, to ℥j. of the maſs, give a Saphire, but not comparably ſo polite as one made with gold.

But being unwilling to calcine Marcaſite, let him take Zafora, and mingle to ℥ j. from five to ten grains; Granates of *Bohemia*, or Oriental pulveriſed, add from ſix grains to ℈ j. to ℥ j. of the maſs, for little green ſtones like to the natural ſmaragd or emrald: other things which remain of the mixture of the colours, are to be learned by experience.

To what uſes coloured flints and cryſtals are appointed, is not here to be treated of; one uſe excepted, which I ſet down for the eyes, which are weakened by too much watching, the heat of fire and ſmoak; ſee thou have a waxen mold circularly round, of the bigneſs of a diſh or trencher; (the Optiques are wont to call ſuch *lentes*) to which, put the beſt clay well mixed with hair: anoint the waxen type with oyl, and exactly apply the beſt prepared earth of crucibles (and durable in the fire) the thickneſs of a finger; which being

ing dryed, perforate in ſome part, that the wax being melted by the fire, may flow forth: afterward burn the mold in an earthen furnace; being burnt, fill it with prepared glaſs, and place it in a wind furnace till the glaſs melt; which at length being cooled, take off the type by attrition, and there ſhalt thou have the cryſtal reſembling the form of the type; which afterward thou muſt make and poliſh like ſpectacles in an iron diſh on both ſides; and take it out with a ſtrong iron wier, and thou ſhalt have a good cryſtalline *lent* for a ſmall price, which otherwiſe is ſcarce made of cryſtal of ſo great a bigneſs. Aud if thou wilt, thou maiſt colour the glaſs green, very pleaſant to the ſight, and fit a foot to it for greater benefit. And the glaſs doth not only ſerve for the Multiplication of light in the night time, that you may ſee a thing a far off in a chamber, but alſo for the fixing and calcining minerals by the Sun-beams, and melting of Metals, and multiplying of Pictures, like an hollow glaſs, and alſo for other uſes it may be compared with an hollow looking-glaſs, which doth the ſame of an equal bigneſs with the hollow glaſs; nor is there any other difference of them but reflexion. This glaſs-inſtrument is made likewiſe another way, and by leſs coſt and labor, if it be of a poliſht looking-glaſs, if two great orbes are cut out with a diamond, and if they are ſomewhat ſoftned with Fire, and are left there ſo long in the heat, until they ſhall ſtick like wax very cloſe to the ſtone, which done, let them be cooled again, which afterward taken out, will repreſent the form of an hollow glaſs; to which, it behoves to fix a leaf on the convex part. And the glaſſes do the ſame that an hollow metallick looking-glaſs doth, the reflexion excepted, which is not ſo ſtrong as of the hollow glaſs: And although the glaſſes are ſooner broke, yet they are very fit for the making of the following Inſtrument.

And they are bound together with a ſtrong wier, applyed acroſs on the concave part, and an hole is cut in the brim with a diamond on one ſide, of the bigneſs of a pea, then the creviſes are exactly cloſed in every place with the beſt lute; which done, a ſilver or copper ring is to be tyed about it, holding thoſe glaſſes ſtraightly, ſo that the Inſtrument may be fitted to the foot, all which well done, thoſe ſtrong wiers are ſeparated or cut off, with which the glaſſes were bound at firſt, namely, near the copper ring: afterward very pure *Aqua vitæ* is to be put in through a funnel, as much as is required for the filling it up; the Inſtrument being filled, the hole is ſhut up, which is to be kept for uſe; and this Inſtrument is better than the hollow glaſs; eſpecially, if it have in its diameter the breadth of one foot, and may be applyed to proſpective pictures, it doth excellently repreſent and multiply them.

Behind which, if you place a candle in the night, it gives ſo much light in the Chamber, that you would think it came from the Sun. It doth alſo many other things which are here omitted as ſuperfluous. And you may gather the diſperſed light in the aire in the night time with it, ſo that you may read the ſmalleſt writing. Such and others of the like things may be done by this furnace, all which to ſet down, would ſwell the Book too much. Other things of the metals examination and purification by fuſion, in another place.

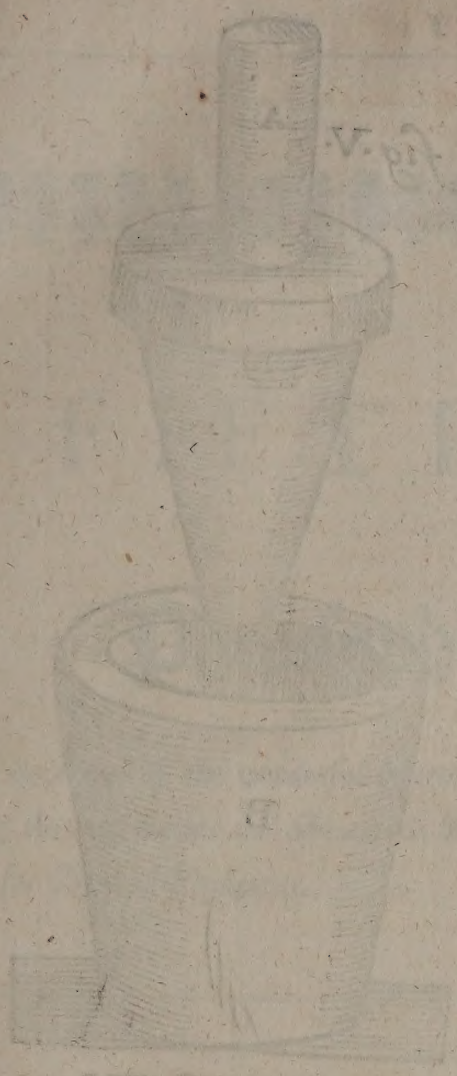
Take this, Reader, which is given to thee, in good part, at another time thou ſhalt have better; and do not miſtake my writings, as if I did reprove the examinations of metals by the Ancients, fuſions and ſeparations, who only would communicate my opinion, and yield my aſſiſtance for further proceeding; for I know that dealers in metals giving too much credit to their ſmall proof when they find nothing, do, contemn oars as barren, often abounding with gold and ſilver; when nevertheleſs, *John Matheſ.* ſays expreſly in his *Sarepta*, that minerals oftentimes tryed in a ſmall quantity do yield no gold and ſilver, which in a great quantity, yield a great deal, wherefore credit it is not always to be given to ſuch tryals, often deceiving, as experience teſtifies.

And this not only in thoſe minerals which are digged out of the earth; but alſo in thoſe clayie and ſandy minerals, abounding with ſilver and golden flames; out of which neither by the leſs nor greater proofs, nor ablution nor Mercury is drawn with gain that thin and fiery diſperſed gold: which by ſome waters is done without fire eaſily; for I know ſuch mines are found neer many rivers of Germany, and many places in other Nations of Europe, out of which honeſt gain without much coſt and labor may eaſily be gotten. Neither are they dreams, which I have ſpoken parabolically of the perfection of metals, for it is poſſible by art to help nature in the perfecting things. There is therefore no more need of any thing than of knowledge; therefore the nature of metals being known, and their properties, they are eaſily ſeparated, purged and perfected.

But what I have written of the univerſal medicine, I have done for the aforeſaid cauſes, which have made me believe the thing, not as profeſſor of the Art. The other things of coloured red glaſſes and looking glaſſes I have added, becauſe they are eaſily prepared by this furnace, as ſometimes neceſſary in ſome works. Other things of the handling metals are not without cauſe now omitted, which happily may be ſometime delivered in another place, wherefore now we end.

FINIS.

THE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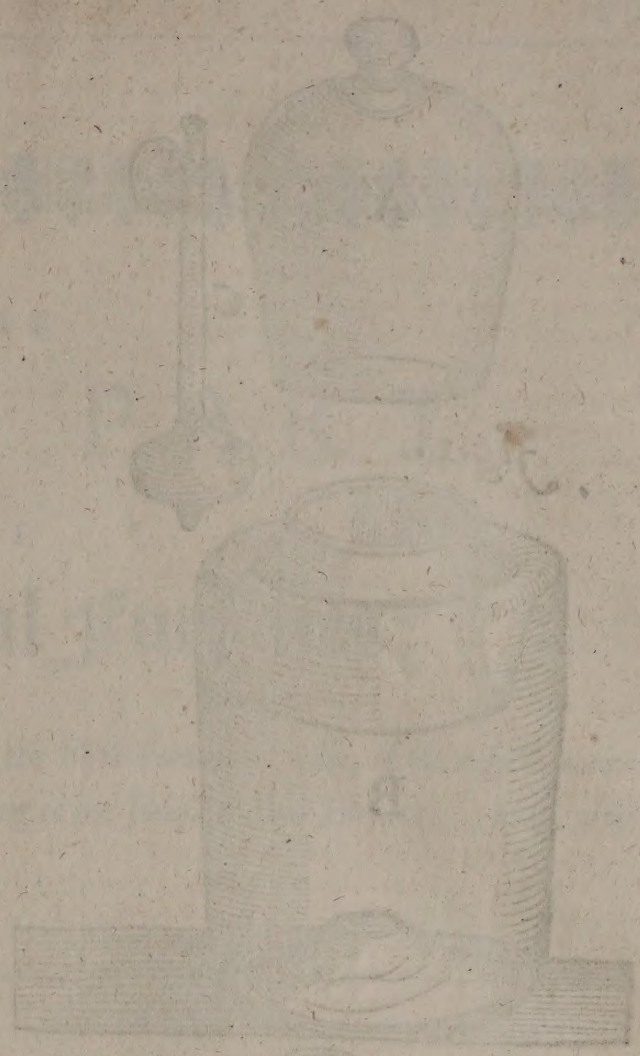
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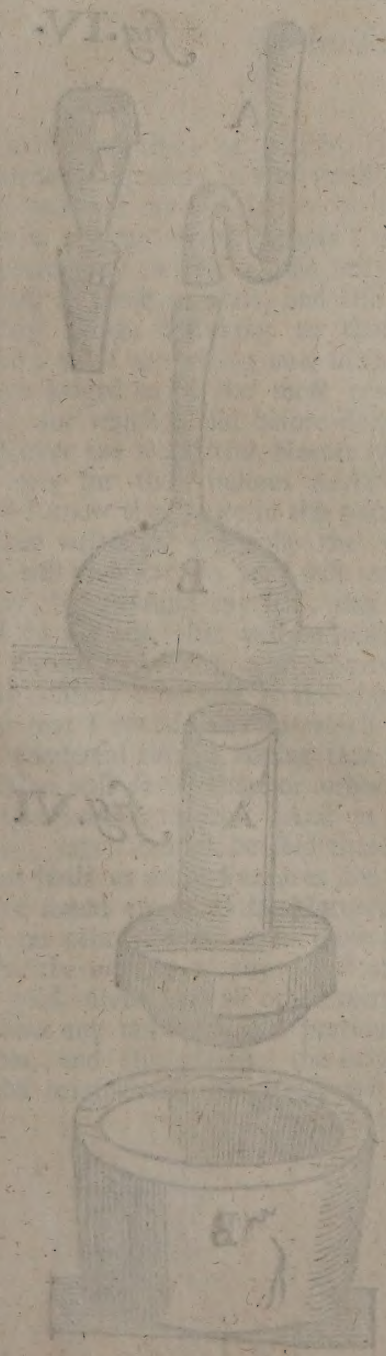
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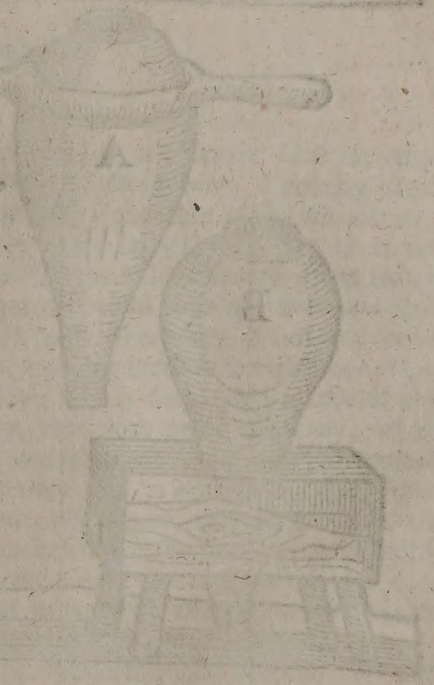
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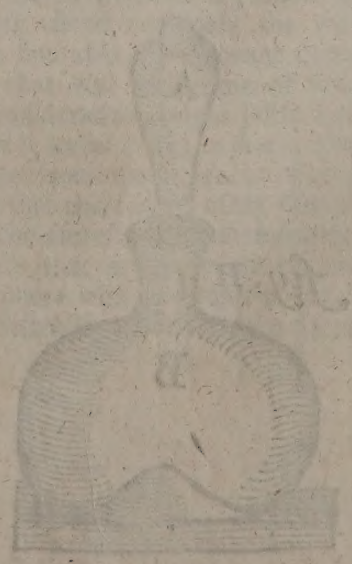
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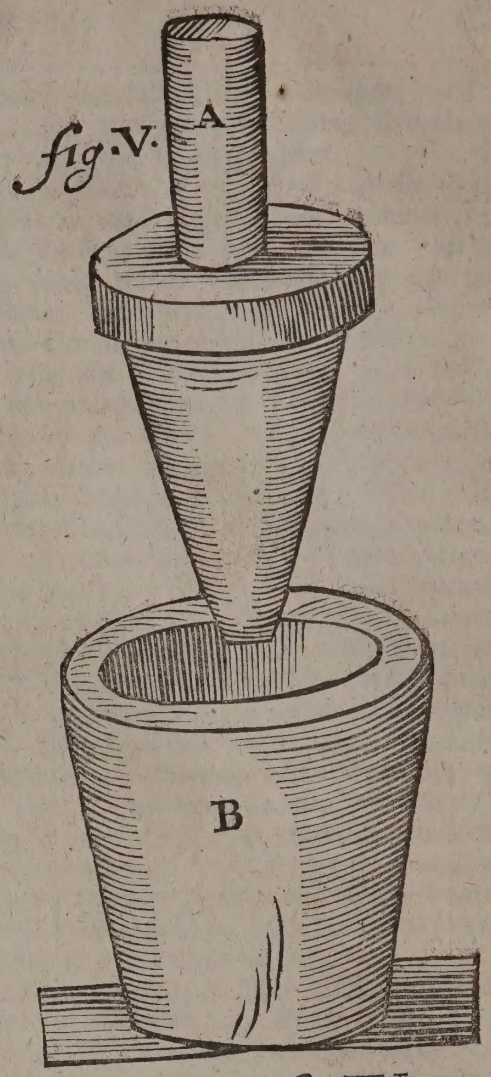
fig. I.



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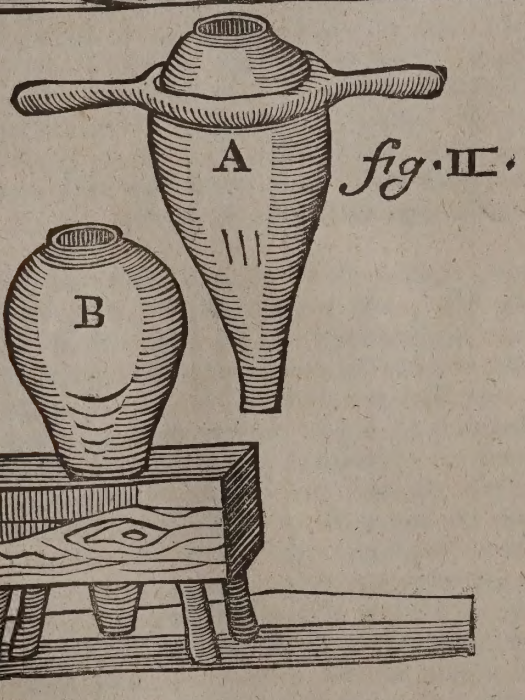

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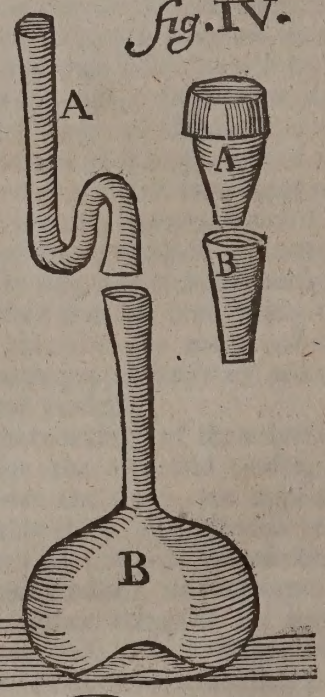

fig. IV.

fig. II

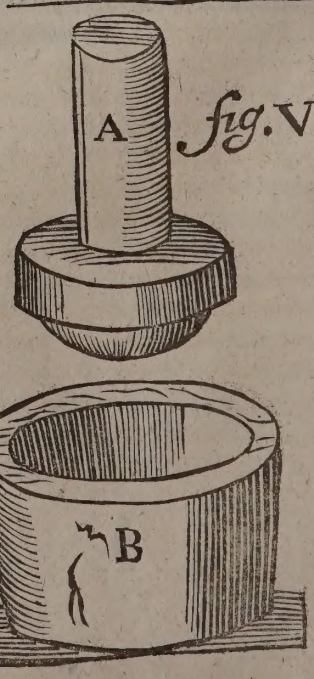

fig. VI

THE

FIFTH PART

OF

Philosophical Furnaces:

In which is treated of the wonderful Nature of the Fifth Furnace: Also, of the easy Preparation of the Instruments and Materials belonging to the foresaid Four Furnaces. Most profitable for Chymical Physitians.

Of the Preparation of the Furnace.

AS concerning this, of which, though I made no mention in the Preface; for it was not my Resolution to mention it in the last Part, because I was purposed only to treat of the Instruments, as well earthen, as those of glass, and also of the other necessary things belonging to those four parts premised; yet I am willing now in this Part, (which I have judged to be the most convenient place for it, for which I did before design another) to discover the wonderful Nature thereof, as far as I may for the Studious Artist's sake. And although I know that more in this part, than in all my other writings, especially the ignorant and unskilful, will be offended; yet I will not therefore pass it by, perswading my self, that by this means I shall do a work, that will be most acceptable to the searchers of Art, and Nature. For I do devoutly affirm, That this is the choicest of all my secrets that I confide in, in which I have already seen wonderful things, hoping that the Divine Benediction will some time or other be obtained upon the practice thereof. And as for the structure of it, much cannot be said thereof, because it is not built as other Furnaces are, but it is every where found extructed by Nature, being ordained for no other works, than those of Nature, *viz.* for the making of any *menstruum* that shall dissolve gold, silver, and all other metals, and minerals without any noise, as also pretious, and common stones, and also glasses: the original of which, is the original of the *Menstruum*. Now what, and what manner of Furnace that is, that produceth this Royal *Menstruum*, (coming from the *Menstruum* it self) and that easily without any labour, you may easily conjecture, that it is not any common one, by the help whereof other things are distilled, that can yield such a *Menstruum* that is not corrosive: which certainly is not any common *Menstruum*, because there is but this one *Menstruum* that I know, which doth not partake of any corrosive quality, that doth more than any, or all other corrosive waters whatsoever. For all corrosives whatsoever they are, as *aqua fortis*, *aqua regia*, spirit of salt, vitrioll, allome, aud nitre cannot together, and at once dissolve the close union of gold, and silver, and other most hard subjects, that cannot be dissolved in waters, though never so caustick.

This indeed is wonderful, and stupendous, that a thing every where found most vile and base, should doe so great a miracle: I know not what moved me to write of it, knowing that I shall in this part offend not onely the wise by writing so openly, but also the ignorant detractors, and slanderers that will accuse me of falsity. And truly these considerations might justly have deterred me, but that I knew I might doe a good work, recalling many from their errors: For many are perswaded that there is no other dissolving *Menstruum*, besides the aforesaid corrosive spirits; but those are Chymists that are ignorant of Nature; yet the Philosophers with one consent say, that those corrosive destructive spirits make a fruitless solution of

metals; for experience teſtifies, that the ſolutions made by the help of *aqua fortis*, and *regia*, and other ſpirits, colour the hands, being that which a true Philoſophical ſolution doth not, and furthermore, teſtifies, that thoſe, *viz.* which colour the hands, are not to be reckon'd among the true Philoſophical ſolutions, but to be contemned as Malignant. Wherefore I was willing to write theſe things to inſtruct thoſe that erre. Let no man therefore perſwade himſelf, that a *Menſtruum* ſo vile and contemptible, is of leſs efficacy, than thoſe corroſive ſpirits. I my ſelf did once ſcarce believe, that ſo great Vertues could be in ſo moſt vile a *Menſtruum*, until I had experience of the truth in good earneſt.

I could here add more things concerning the original of the univerſal *Menſtruum*, which is ſo contemptible, which doth by its wonderful powers and vertues diſſolve all metals, minerals and ſtones radically without any noiſe, unites and fixeth them; the ſolution whereof doth not colour the hand; the conjunction is inſeparable, and the fixation incombuſtible; I ſay, I could add more things concerning it, but that divers inconveniences, which by this means I might incur, as alſo the envy and hatred of others do deter me. For although any one doth think to diſcover the poſſibility of Art, and Nature; yet few would be content therewith, being very deſirous of all manner of revelation; and if we ſhould not gratify them, we ſhould forthwith incur their hatred and envy, who would without doubt judge otherwiſe of the matter, if they had but any experience of our labours. Be thou therefore (courteous Reader) contented with this diſcourſe, that ſhews thee the poſſibility of Art and Nature; and diligently ſeek after it in the fear of God, and without doubt thy labour ſhall not be in vain.

Of the Building of the Furnaces.

HOw thoſe Furnaces of the firſt and ſecond part are to be built and made of Potters Clay, and Stones; I need not ſay much, becauſe there be many Books extant, treating of this matter ſufficiently; yet this caution is to be obſerved in building of the Furnaces, *viz.* that thoſe Furnaces, in which a very ſtrong fire is not kindled, need not ſo ſtrong walls, as thoſe in which we diſtil, ſublime, and melt, with a moſt ſtrong fire. And for what belongs to ſubliming and diſtilling Furnaces; you may erect them of thoſe common bricks which are made of the beſt clay, and well burnt, compaſſing them about with very ſtrong walls, that they may the lónger retain the heat: or elſe you will continually have ſomething to do in mending them, and cloſing their chinks, which hinder the regiment of fire. Wherefore they muſt be compaſſed about with iron hoops, that they may be durable and not gape. Now what concerns the melting Furnaces, the aforeſaid bricks are not of uſe in the building of them, becauſe they not being durable melt in the fire; wherefore you muſt make other bricks of a very good earth that is fixed in the Fire, ſuch as is that of crucibles, *&c.* of which, afterwards; which are to be made in a brazen or wooden mould, and to be burnt, and it matters not whether they be round or ſquare, a regard being had of the Furnace, that ſix or eight of them make one courſe, or row. But you need not build the whole Furnace of thoſe ſtones, for it is ſufficient, if the place only, where the coals ſtill lye, be made of them, and the other part of the Furnace be made of common bricks.

A Lute for the erecting of Furnaces.

LUte may be made divers wayes for this buſineſs; for men prepare their Lute ſeveral wayes as they pleaſe. Some mix with ſifted Potters earth, the beaten hairs of Cows, Oxen, Harts, or the chaffe of Barley, Tow, Flocks, Horſe dung, and the like, that hold together the clay, and prevent chops, to which they add ſometimes ſifted ſand, if the clay be too fat, beating the mixture together with water, and bringing it to a juſt conſiſtence. And this is the beſt mixture, that is not ſubject to cleaving, yet weak, becauſe in length of time the hair and chaffe are burnt, wherefore the Furnace becomes thin and weak. Many leave out combuſtible things, and mix Potters clay, and ſand together, and temper them with brine, for the making of their Furnaces. And this is the beſt mixture, becauſe it is not combuſtible as the other is, neither is it ſubject to cracking, by reaſon of the ſalt: and for this purpoſe, the brine of fiſh and ſalt fleſh doth ſerve, and is very good, becauſe the blood helps the joining of them together: but if the *Caput mortuum* of vitriol or *Aqua fortis*, being mollifyed, be mixed with Potters clay and ſand, you go a better way to work: for this Lute is not at all ſubject to cracking, but fixed in the fire and permanent. With this Lute are Retorts, and Gourds very well luted, and coated, alſo the joints of Retorts, and Receivers cloſed: this being mollifyed with a wet cloth applyed to it, may again be ſeparated, and taken off, as that alſo with which ſalt is mixed: but the other Lutes that want ſalt will not be ſeparated, by reaſon whereof glaſſes oftentimes are broken. Wherefore in defect of the *Caput mortuum* of Vitriol, temper the clay and ſand with brine: But many mix the filings of iron, powdered glaſs, flints, *&c.* but you need not them for the building of the Furnaces, but only for the coating of certain glaſſes uſed for ſeparation, and diſtillation, becauſe the filings of iron being helped with ſalt, binds, and joins together moſt ſtrongly.

Of the cloſing of the Joints, kindering the evaporation of ſubtle Spirits.

THe aforeſaid Lute is ſufficient for the cloſing of the Joints of the firſt Furnace, where air is not kept from the Spirits, but not of the Veſſels of the ſecond Furnace, where moſt ſubtle Spirits are diſtilled, which it cannot retain, penetrating the ſame with the loſs of the better part: wherefore you muſt make choice of another; unleſs upon the other being well dryed, a mixture made of quick Lime, moſt ſubtilly powdered, and Linſeed-oyl, beſmeared over with a pencil, which the porous clay attracting to it, is fortifyed, ſo as to to be able to retain thoſe moſt ſubtle Spirits: but this Lute can hardly be ſeparated again; becauſe refuſing water, it cannot be mollifyed; wherefore the clay is to be tempered only with the white of eggs, and to be applyed with linnen clouts: but you muſt prevent the burning of the linnen, by reaſon of the extream heat of the neck of the Receiver

ceiver, by putting between an iron or ſtrong glaſs, *viz.* betwixt the receiver and the retort. The joints alſo may be cloſed with oxe bladders wet in the white of eggs, alſo with ſtarch tempered with water, if it be ſometimes applyed, being ſmeared on paper. For by this means thoſe moſt ſubtile ſpirits are eaſily retained, but not corroſive, for which uſe the *caput mortum* of *aqua fortis* is more convenient which after it is dryed muſt be ſmeared over with a mixture made of linſeed oyl, and quick lime.

And divers kinds of theſe lutes are had being deſtined to divers uſes.

Another Lute for broken Glaſſes.

IT happens ſometimes that glaſs veſſels, as receivers, and retorts, have ſome cracks, but otherwiſe are whole and ſound; which are greater in thoſe glaſſes that do again ſuffer the heat of the Fire, wherefore at laſt the glaſſes are broken, which if you will prevent, make a liniment or thin lute of linſeed oyl, quick lime, and red lead; which being ſmeered over a linnen cloth apply to the crack, upon which being dryed apply another: but if the crack be very great, you may apply three or four linen cloths, for the greater ſafety ſake: as you may apply the whites of egges beaten together, upon the cracks with linnen, and caſt upon it quick lime ſifted very fine, and preſs it down hard with your hand: which being done, you may apply over them more linen clouts wet in the whites of eggs, and caſt upon them quick lime again: which when the lute is well dryed, retaines the ſpirits, but ſooner ſubject to the corroſion of corroſive ſpirits than the former.

Note well that quick lime is not to be mixed with the white of eggs, and ſo uſed upon linen clouts, as the manner of ſome is; becauſe the whites of eggs acquire a hardneſs from the lime before they be united, and therefore cannot ſtick, but linen clouts wet Firſt therewith before the quick lime be caſt upon them, ſo that the lime doth not immediately touch the glaſs, being applyed betwixt two linen cloths.

How thoſe ſubtile ſpirits when they are made, may be kept that they evaporate not.

THoſe glaſſes in which thoſe ſpirits are kept are for the moſt part ſtopt with cork, or wax, upon which afterward bladders are bound: which ſtopping is convenient for ſome ſpirits, that do not prey upon cork or wax: For all corroſive ſpirits, as of vitriol, Allome, common ſalt, nitre, *&c.* corrode cork; and lixivial ſpirits, as that of harts-horn, tartar, ſalt armoniack, urin, wine, *&c.* melt wax, and penetrate it.

And although other ſtopples might be made, which might retain both ſorts of ſpirits, yet it would be tedious and laborious to open thoſe ſo often, and to ſtop them again. Wherefore I have found out a fit kind of glaſſes, *viz.* of ſuch, whoſe mouths have diſtinctions, and are fit to receive their covers; as it appears by the delineation. [*See the firſt figure*]. *A.* ſignifies the cover: *B.* the glaſs containing the ſpirit. *C.* a drawer by the help whereof the ſpirits are taken out of the glaſs, when there is occaſion, into the diſtinction in the brim of the mouth; *viz.* of the glaſs that contains the ſpirit, is put quickſilver, and upon this is put a cover; this being done, the Mercury cloſeth the joynts of both glaſſes running in the brim, ſo that nothing at all can evaporate: for the ſpirits do not penetrate the Mercury, unleſs they be very corroſive (a thing to be noted) which then in proceſs of time turn the Mercury into water, but very ſeldom; and then the Mercury is to be renewed. But we need not give ſo much honour to corroſive ſpirits, being not to be compared to thoſe volatile ones, which being abſtracted from corroſives not prey upon Mercury; and muchleſs than theſe, do lixivial ſpirits corrode Mercury; and for the ſake of theſe were theſe glaſſes invented, by the help whereof moſt ſubtile ſpirits are without any loſs of their vertues, if you pleaſe, a very long time preſerved and kept. And becauſe when there is occaſion the ſpirits cannot be poured forth by reaſon of the Mercury in the brim, you muſt get a drawer like to that, by the help whereof wine is taken out of the veſſel, but leſſer, having a belly with a little mouth made very accurately. This being let down you may take up as much as you pleaſe, as is needful; the upper orifice whereof being ſtopped with the finger nothing drops out; being put into a leſſer glaſs is thence poured forth for your uſe. Then you muſt again cover the remainder of the ſpirit that is in the glaſs, and as oft as is needful take out with that drawer as much as is uſeful. And this is the beſt way by which the moſt ſubtile ſpirits are retained; which alſo are very well retained in thoſe glaſſes, whoſe ſtoples are of glaſs ſmoothed with grinding. But this is a more coſtly way of keeping in ſpirits, and it is done after this manner.

How glaſs ſtopples are to be ſmoothed by grinding for the retaining of ſpirits in their glaſs veſſels.

FIrſt of all order the matter ſo that you have glaſs bottles of ſeveral ſorts, ſome greater, ſome leſſer, with ſtrong necks, and mouths, with their glaſs ſtopples, which being ſmoothed by grinding ſhut the orifice of the bottle very cloſe. Now they are ſmoothed thus. Put the ſtopples in the turn, being ſet or faſtned in ſome wood, bring it into a round ſhape, then being moiſtned with *Smiris*, and water mixed together, let it be put to the mouth of the bottle, ſo as to be turned round in the mouth of the bottle, which you muſt often take away from the ſtopples being faſtened to the turn, for the oftner moiſtening of it, which is with that mixture of prepared *Smiris* and water, with the help of a pencil, or feather; and that ſo often and ſo long, until the ſtopple ſtop the mouth of the bottle moſt cloſely: which being done, you wipe off the *Smiris* with a lint from the ſtopples and mouth of the bottle, then ſmeer over the ſtopple with a liniment made of ſome fine waſhed earth, and water, or oyl, and again turn it round in the mouth of the bottle, and often ſmear it over with this freſh mixture, until the ſtopple be moſt exactly ſmoothed, which afterward is to be tyed to its proper bottle; the ſame alſo is to be underſtood concerning the reſt, that one may not be taken for an other, *&c.* And that you may not need to take away ſo much from the ſtopples, and bottles, get ſome copper moulds made for the ſtopples, which ſtopples muſt be taken whileſt they be yet warm, ſoft, and new drawn from the furnace, that they may be made of a juſt roundneſs, as alſo other copper moulds. Which muſt be put into the mouths of the bottles, whileſt they be yet hot and ſoft, for the better making of them round, whereby afterwards the ſtopple may more eaſily, and quickly become fit to ſtop the

mouths of the bottles very close, (as for example: *A.* is the ſtopple, *B.* the glaſs or bottle) if thou knoweſt how to order them rightly, they will quickly and eaſily fit one the other.

In defect of a turn, proceed after the following manner, which is ſlow, yet ſafe, becauſe in a turn the glaſſes, oftentimes waxing hot are broken by reaſon of the over great haſt; and it is thus, make an iron or wooden receptacle fit to receive the glaſs bottle, which being covered about with linen, and put in, join both parts of the receptacle warily and ſoftly, with the help of a ſcrew, that the bottle be not broken, and that that inſtrument, or receptacle of the bottle being faſtened to a form with the help of the ſcrew, cannot be moved. Afterwards cauſe that another wooden inſtrument be made for the ſtopple (as for example, *A.* the ſtopple with its receptacle *B.* the bottle with its receptable) that may be ſeparated in the middle, and be again reunited with a ſcrew after the putting in of the ſtopple, which being ſmeered over with the aforeſaid mixture of *ſmiris* and water, take the inſtrument with both hands, and put the ſtopple round about the neck of the bottle, and grind it round upon the other, as Wine Coopers are uſed to do in ſmoothing the taps; and that ſo long until the ſtopple be fit for the bottle; then reitereate the ſame labour with the earth *tripolis*, until it be compleated; and it will ſtop as well as a ſtopple made by the help of a turn [*See the ſecond and third Figures before the fourth part.*]

After this manner alſo you muſt work thoſe greater glaſs receivers of the firſt furnace, that without luting they may be cloſed. Stopples alſo of vials or Boltheads for fixation may be wrought after this manner, which in ſtead of luting may be put into the mouths of the vials, upon which are put caps of lead; by which means in caſe of neceſſity they may be lifted up, *viz.* in caſe the ſpirits by too ſtrong a fire be ſtirred up and rarified, by reaſon of the danger the glaſſes are in to be broken, and may again fall down into the mouths of the bottles being preſſed down with the leaden caps, and ſo ſtop cloſe again. And this way of ſtopping is better then that which is done with cork, wax, ſulphur, and other things: becauſe in caſe the fire be not well governed, and by conſequence an errour is committed, you may preſerve your glaſſes by lifting up of the ſtopples, *viz.* when the ſpirits are too much ſtirred up. And although this be a better way of ſtopping than the other common way; yet that which follows is better then this, whereby the ſpirits are eaſily retained, the glaſſes being preſerved, and without all danger of being broken. And it is thus, *viz.* get a glaſs pipe to be made crooked according to the figure ſet down, into the belly whereof is quickſilver to be put from half an ounce to an ounce, or thereabouts, and let this pipe which hath a belly be put into the vial containing the matter to be fixed (as for example. *A.* the pipe with a belly, *B.* is the vial, and again *C.* ſignifies the aforeſaid leaden cap with the neck of the vial *D.*) the joints whereof afterwards are to be covered over with lute, and the vial will never be in danger of being broken. *See the fourth Figure.*

Theſe foreſaid ways of ſtopping are the beſt, by which the breakings of glaſſes are prevented, *viz.* whileſt men are in an errour about the fixing of ſpirits of ſalts, minerals and metals, which although they are fixed with great coſts and labours, yet do not ſatisfie what is promiſed and expected, becauſe thoſe kinds of fixations are violent and forced, and by conſequence contrary to nature: but in the profitable fixation of ſpirits, not ſo, where we muſt follow Nature, and not commit our ſelves to fortune in our labours. For only fools are wont to break their glaſſes in their ſuppoſed tincture; but Philoſophers not ſo; for *every violent thing is an enemy to Nature*; and all the operations of Nature are ſpontaneous. They erre therefore, and never ſhall come unto their deſired end, who attempt violent fixations. I cannot be perſwaded that bodies dead, or half dead can be ſo mixed together as to multiply: but I could eaſily believe that the conjunction of male and female of one and the ſame ſpecies, ſound and nouriſhed with ſound and wholeſome meats to be natural, and to make a ſpontaneous propagation, and multiplication of their ſpecies; *viz.* of thoſe that endure in a good, and adverſe fortune, in life, and death; but the conjunction of dead things, to be dead, and barren. Do but conſider how many and various inſtruments both gold, ſilver, copper, iron, tin, and lead; as alſo earthen, glaſs, ſtone, and other veſſels of other materials have been already invented, and found out for the fixing of Mercury alone with gold and ſilver, but in vain, becauſe they have no mutual affinity. For although Mercury adheres to metals, or metals to it, yet that is not by reaſon of any affinity for multiplication, or perfection ſake: for it appears by experience that Mercury flies away in the fire, and leaves the gold, ſilver and other metals. Where it is clear that they have no mutual affinity requiſite for the multiplication of metals, nor is it ever poſſible: For they that have a mutual affinity embrace one the other and abide together for ever, although volatile, yet never leave one the other, like gold and Mercury, when they are united together with the ſtrongeſt bond, ſo that they can never be ſeparated although with the ſtrongeſt Fire. Wherefore a great care is to be had in the fixation of things joined together; which if they have a mutual affinity, will embrace and retain one the other, without the help of any curious glaſſes with long necks. Of which things if thou art ignorant, abſtain from medling with them, as being more hurtful then profitable, as dayly experience both mine own, and others do witneſs. But that thou mayſt the better underſtand what things have a mutual affinity one with the other: attend a little to what I ſhall ſay.

Is not he to be laughed at for his folly who will pour rain, or common water on gold, ſilver, and other metals to fix them? See therefore the unwiſe actions of many covetous Alchymiſts in ſo hard a matter, that ſpend their time in trifles, reaping according to what they have ſowed, and at laſt leave off their work which they have undertaken, after they have expended much coſt, and ſpent their labour in ſtenches, watchings, and cares. For I have oftentimes ſeen thoſe, that although they have not choſen common water for their *menſtruum*, yet have made choice of *May*-dew, ſnow or rain gathered in *March*, and water diſtilled out of Noſtock, or excrement of Stars; vegetables and animals for their ſolvent, in which they have loſt their labour.

For as the radical union of the aforeſaid things with metals is impoſſible: ſo never is any good to be produced from thence, by reaſon of their difference. And ſuch may deſervedly be compared to thoſe, who aſcending a very high ladder that hath many ſteps, doe preſently endeavour to fly from the lowermoſt to the uppermoſt; which is a thing impoſſible: ſo neither can there be any conjunction of things that do ſo much differ. But as any one may

may eaſily aſcend the higheſt ſtep by degrees, ſo alſo any one may (which yet he need not do) join together extreams, by adding firſt a thing that is moſt near to one of the extreams, and then to this another next to it, and ſo by conſequence, until you come to the other extream, which is a thing that requires a very long time, and is a work without profit. And if things be joined together that have the next affinity, the one will be delighted in the other, and the one will embrace the other, will overcome, and retain it. As for example, there is a certain ſalt, and that only, that can coagulate, and turn into a body like to it ſelf, even common water, which can be fixed in a very little time, with, and by one only certain mineral, which is very volatile. Minerals alſo may be fixed by metals, and metals, (a thing which I never yet tryed) by a certain thing more excellent than metals, without all doubt. But therefore it is needful in the fixation of minerals to begin with the coagulation of water, whereby it is turned into ſalt; and this afterward into a mineral; which would be too tedious; but it is ſufficient to begin in things moſt near, in which nature hath begun to operate, but hath left imperfect; for then there is hope of gain, if contrary things are not joined together, elſe not. Behold how ready Nature is at hand to help any thing that is adminiſtred to it, which it can help: as for example, make ſalt of calcined Tartar by the help of ſolution and coagulation (but do not take that for it, of which a little before mention hath been made, which is far better than ſalt of Tartar) of which after it is calcined, obſerve the weight; upon which afterwards pour half the weight of moſt pure rain water; diſtilled to avoid the ſuſpition of impurity; then draw off the water gently in *Balneo*, or Sand, which again pour upon the remaining ſalt of Tartar, and again draw it off; this do ſo often as is needful, until all the water be conſumed. Which being done, take out the ſalt, and weigh it, being firſt made red hot in the Fire, and thou ſhalt find it to be increaſed in weight, which increaſe came from the water, and not elſewhere.

Note well that the cohobation of the water is to be reiterated often upon the ſalt of Tartar. Obſerve, that by this means, the water is convertible into ſalt by Art, *&c.* And if thou doſt not believe the converſion of things material and corporeal, how wilt thou believe the converſion of things immaterial, as of the Sun, and Fire into a material fixed ſubſtance; of which thing, ſomething ſhall be treated in our Treatiſe of *Aurum potabile*, and more at large afterwards in a Treatiſe *De Generatione Metallorum*, if God permit: For you muſt know that the circulation of the Elements, and things elementated, *viz.* how one is converted into another; and how they nouriſh and cheriſh one the other: as for example, the Earth yields Water, the Water Air, the Air Fire, and the Fire again Earth; which if it be pure, yields pure Earth. But that thou maiſt underſtand aright how any thing to be fixed, may be retained by another, by reaſon of affinity, obſerve the following example. The Husbandman caſting ſeed into the Earth for to multiply, doth not chooſe any Earth, but that which is convenient for multiplication, *viz.* an Earth that is neither too dry, nor too moiſt; for the Seed caſt in ſand cannot grow, but is loſt: For whatſoever is to be preſerved, is to be preſerved by an equal temper; which, by how much it is more equal or like, ſo much the more perfect ſubſtance it doth produce. Humidity therefore being neceſſarily requiſite for the growth of vegetables, without which, they can neither grow, nor multiply, but the ſeed being caſt into moiſt ſand, and the Rayes of the Sun acting upon the ſand, and ſuddenly conſuming the humidity thereof, whence follows the burning up of the ſeed in the dry ſand, becauſe there was no affinity betwixt the water, and ſand; without which, the water could not be retained by the ſand, and conſequently, the ſeed deprived of its nutriment; it follows neceſſarily, that ſome *medium* be required, or bond joining and binding the rain, and ſand; *viz.* ſalt, by the help whereof, the rain water is retained by the ſand, that it be not ſo eaſily conſumed by the heat of the ſun.

The ſand therefore retains the ſalt, and the ſalt, the rain water for the nutrition of the bud: but every ſalt is not convenient for this buſineſs; for although Chriſt ſaith, *Luk. Chap.* 14, Verſe the laſt, that earth without ſalt is barren; yet any common ſalt is not to be underſtood thereby: [*See more de Natura Salium.*] for ſome ſalts, as common ſalt, ſalt of Vitriol, Allome, *&c.* do not only not do good, but do hurt to Vegetables, hindering by reaſon of their dryneſs their growth and increaſe. Now lixivial ſalts promote them, that which Country-men do better underſtand, than our ſuppoſed Philoſophers: for they know how to help their barren ground with the excrements of Animals; which are nothing elſe but a lixivial ſalt mixed with ſulphur, making the earth fat and fertile. And by this means a *vehiculum* (rather a bond) is adminiſtred to the rain water, that it may the leſs be conſumed by the heat of the Sun. Moreover, all ſeed (conſiſting in a lixivial ſalt and ſulphur) loves its like, from whence it borrows its Nutriment, which is obſerved but by a few Learned or Unlearned. Husband-Men may well be excuſed of their ignorance, becauſe they work only out of Uſe and Cuſtome. But others that bear the Title of Learning not ſo; whoſe Duty it is to Render a reaſon of Germination, who may deſervedly be Aſhamed of their Ignorance, being leſs knowing than Husband-Men. It is manifeſt, that Dung makes the Earth Fruitful; but how, and for what reaſon, not ſo; but if it did want nitrous ſalt, it would neither make it Fertile, nor promote Germination: for it is not unknown, that Nitre is made out of the excrements of Animals. The goodneſs therefore of the dung conſiſts only in the lixivial ſalt contained in it, and not in the ſtraw.

But you will ask perhaps, why doth not any other ſalt help Germination? Why is the ſalt of dung required to Germination, and no other? We have already anſwered that, like are helped with like; and contraries are deſtroyed by contraries: For experience doth teſtify, that every ſeed conſiſts in a lixivial ſalt and ſulphur, and not in any acid ſalt; wherefore alſo it doth deſire and embrace its like. Let him therefore, that will not believe it, make tryal of the diſtillation of the ſeed of any vegetable; of which, let him force over a pound by a retort; and he ſhall ſee by experience, that not an acid ſpirit, but a flegm together with plenty of oyl, and volatile ſalt whitening the whole Receiver, comes over; being that which no root

or ſtalk can do: for the chiefeſt vertue, odour, and taſt of vegetables, animals, and minerals is found in the ſeed, in which thing provident Nature hath done very well, whileſt ſhe attributes the chiefeſt faculties to the ſeed, being more obnoxious to injuries then the reſt, which is alſo preſerved, nouriſhed; and cheriſhed by its like.

Now this diſcourſe which might otherwiſe have been omitted, was therefore appointed, that the cauſe of the germination of vegetables might be made the more manifeſt; and that what things have been ſpoken of the attraction, and fixation of all things might the better be underſtood. The germination therefore, and multiplication of both minerals, vegetables and animals muſt be ſpontaneous, and not forced, as is that barren and fruſtraneous of the falſe Chymiſts, becauſe preternatural. Wherefore when you fix any thing be cautious in the adding of any thing that ſhould retain it, with which nothing can be fixed. Fire indeed doth always do its office; but it knows not how to help any preternatural thing; which it doth wholly deſtroy, againſt which nothing can be prevalent, unleſs it be rightly ordained according to Nature.

And thus much is ſpoken for inſtruction ſake, to thee that intendeſt to fix any thing, leſt otherwiſe thou loſeſt thy labour.

Of the making of the beſt crucibles.

THe beſt crucibles that are requiſite for the fourth furnace, not being found in every place, I thought it worth while to ſet down the manner of making them: for I am not ignorant how oftentimes many for want of theſe are conſtrained to be content with thoſe that are uſeleſs, and truly with great loſs of metals, whileſt the crucibles are broken in the fire, and conſequently with a tedioufneſs in drawing them out of the aſhes.

Chymiſts have been in a great errour a long time, and not only they but alſo goldſmiths, and they that ſeparate metals, as alſo others that need the help of crucibles, who perſwade themſelves that the beſt earth that is fit to make the beſt crucibles is to be found no where but in *Haſſia*; and therefore with great charges have cauſed that Gibſenſian crucibles be brought over; not conſidering that almoſt in every place in Germany ſuch earth is to be found, which indeed is a very great folly of men, proceeding from the not knowing of good earth which is to be found almoſt every where. I do not deny but that the earth of *Haſſia* is very good for crucibles, tyles, retorts, and other veſſels which are to be ſet in a very great Fire, for which cauſe alſo is commended Gibſenſian, and Waldburgenſian crucibles.

A few years ſince ſome have made their crucibles, and other veſſels that will endure the fire well, of earth brought out of *England*, and *France* into *Holland*, which have retained metals very well in the fire, but not ſalts, becauſe they are too porous and not ſo compact as thoſe of *Haſſia*, wherefore thoſe of *Haſſia* are ſtill preferred before others, retaining better, metals, and ſalts. But although this earth be brought from thence to other places, yet ſuch ſtrong crucibles could not be made thereof, the cauſe whereof being not the conſtitution of the air, and place to which ſome have falſely imputed it, but an error in the making and burning of them. For in *Haſſia* there is a great abundance of wood, of which there is no ſparing in the burning the crucibles even to a ſtony hardneſs, which could not be done by a ſmal Fire of turffes.

The like errour is committed about ſtone pots, and other veſſels which are made at *Frechemium* and *Siburgus*, and other places near *Colen*, which are carryed almoſt through all Europe, the goodneſs whereof is aſcribed only to the earth, and not to the making. But now experience hath taught us that any good earth doth become ſtony in a violent fire, without reſpect of the place where it is taken. Wherefore it is very probable, being a thing poſſible, that ſuch veſſels are made elſewhere: for every earth being burnt retaining a white colour, *viz.* with an indifferent Fire, makes pots, and crucibles porous, but with a ſtronger, and with a longer delay, compact like glaſs, eſpecially if common ſalt be caſt in a plentiful manner upon them, being burnt with a very ſtrong fire, becauſe it addes to them being very well burnt within an external glaſy ſmoothneſs, by which means they will be the better able to retain ſpirits in the Fire. Wherefore let no man doubt concerning the making the foreſaid veſſels of any other earth that is white in burning, with the help of a very ſtrong Fire: which by how much the greater whiteneſs it gets in burning, by ſo much the better and excellent pots it makes; and ſeeing there is a great difference of making crucibles to be ſet in the Fire, and of ſtone pots retaining liquid things, I ſhall ſhew the manner of making both, *viz.* of ſtone pots belonging to the firſt and ſecond furnace, and of crucibles to the fourth, and thus it is.

He that will try the goodneſs of white and pure earth, *viz.* whether it grows ſtony in the fire, let him caſt a peice of crude earth of the bigneſs of a hens egge into a very ſtrong Fire, obſerving whether it doth quickly or ſlowly cleave and break in pieces; which if it doth not cleave and become powder, although it may have ſome cracks, is good earth, and fit for burning, if ſo be the mixture be well made, in which lys the art.

The earth that is to be burnt, for pots, receivers, and bottles, needs no other preparation then that for bricks, which becauſe for the moſt part it is too fat, you muſt mix with it clean ſifted fuſible ſand, tread it with your feet, and knead it with your hands before veſſels be made thereof; which being made are to be dryed in the heat of the Sun, or in ſome other warm place; and being dryed are to be burnt in a very ſtrong Fire for the ſpace of twenty four or thirty hours, on which in the mean time you may caſt ſalt if you pleaſe, which being thus burnt do like glaſs retain eaſily all liquid things. But let him that makes crucibles, tyles, bricks and other veſſels appointed for a very ſtrong Fire, uſe more diligence in the making of them. And truly firſt he muſt beat very ſmall with a wooden hammer, the earth being dryed well in the Sun, or elſewhere, and being beaten ſearſe it through a great ſearſe, and to one part of the ſifted earth mix two, three, or four parts (the fatneſs of the earth being conſidered) of the earth burnt in a potters furnace, and powdered, which being mixed with a ſufficient quantity of water he muſt tread with his feet, and afterwards knead with his hands, and the earth will be prepared for the making of veſſels, and when he makes crucibles and teſts, let him provide for wooden moulds both greater and ſmaller, made in a turn, hy the help whereof they may be made, for the aforeſaid veſſels cannot be formed by the uſual art of the potters; becauſe the matter of them muſt be very lean, appointed

pointed for a moſt ſtrong fire; wherefore commonly they are made by the help of moulds after the following manner.

Let a piece of the prepared earth be applyed with your hands to the mould. which you muſt hold in one hand, applying and fitting the earth thereto with the other, or hold it with your legs, that the earth may be applyed with both your hands. Alſo you muſt firſt rub the mould very well with clean ſifted ſand, for elſe the earth will ſo ſtick to the wooden mould, that a crucible can ſcarce be taken off without danger, which being done, it is further fitted by ſtriking it with a wooden inſtrument ſmoothed for the purpoſe, by which means the crucible lyes very exactly upon the mould, for by this means crucibles are made very ſtrong; which being done alſo let the crucible be taken off, and ſet upon a board, and be dryed, firſt in the air, then by the heat of the fire, or ſun, and then be burned in the firſt chamber of our fourth furnace, or in a potters furnace. And if you intend only to melt metals and not ſalts, you need not burn the crucibles if they be well, and exactly made.

Now this caution is to be obſerved in melting by the help of crucibles not burnt, that you muſt give fire above by little and little, for fear of breaking the crucibles feeling a ſuddain heat.

Now that they may be made equal in ſtrength, weight, and thickneſs, you muſt weigh one crucible rightly made by the help of the mould in one ſcale, and a piece of the prepared earth, which is to be put into the other ſcale, and if they be equal in weight, take out that piece, and put in another; and this do ſo often, till you be come to the number of the crucibles which you would have made: By this means they are made equal, and you need not cut off any overplus of the earth when it is fitted to the mould, becauſe all are made equal, by reaſon of the equal weight of the matter of each of them, and the work is ſooner done then otherwiſe.

This indeed is the beſt way but tedious and laborious, wherefore conſidering the matter a little more ſeriouſly, I found at laſt that the following way is far better than the former; whereby not only ſtronger crucibles are made, but alſo more in one hour, then in that former common way in three or four. Where firſt, the mould is made of latten (on which I adviſe you to apply the earth) ſignified by the letter *A*. *viz.* that being the beſt, which is made by the help of fuſion. Then the counter-mould anſwering this, ſignified by the letter *B*. yet ſo that that do not enter too deep into this, not touching the bottom by the diſtance at leaſt of one fingers breadth; but in greater crucibles a greater thickneſs of the bottom is required, as the practiſe will teach thee.

Let him therefore that is making crucibles apply the earth to the mould, as hath been above ſaid in the Firſt manner, which being done, let him again take off the crucible that is formed or caſt, and ſet it in the air to be dryed. Then having Firſt made a ſufficient number of crucibles, let him make the mould clean from the earth or ſand, and annoynt it with greaſe, or oyl Olive taken up with a ſponge, as alſo the counter-mould, into which let him put the crucible being half made and dryed, and into this the mould, which he muſt ſtrike above twice or twice or thrice with a heavy wooden mallet, that the earth may be rightly, and exactly applyed to the mould; which being done let him take off the mould, and turn the countermould together with the crucible, which let him knock a little againſt the form (where the crucibles are made) and let him take in his hand the crucible falling from thence; which he muſt afterwards dry and burn, as hath been above ſaid in the Firſt manner. And by this way are made the beſt, and the beſt proportioned crucibles, Fixed and ſmooth, not only for melting of metals, but alſo for minerals and ſalts; the like to which I never yet ſaw, as being without all danger, if ſo be rightly made of the beſt earth. And that they may be made eqnal in weight and ſtrength, they muſt be weighed as before hath been ſaid, And this labour is eaſie and pleaſant, when they are made with ones own hand, and that greater or leſſer at pleaſure.

After the ſame manner alſo are made teſts *viz.* by the help of the like kind of moulds, which muſt not be long but plain like ſhells as appears by the annexed Figure, *A*. and *B*. Not only teſts but alſo cuples are made by the help of theſe moulds. [*See the fifth and ſixth Figures.*]

Now teſts are made more eaſily this way then crucibles, becauſe the earth only is weighed, and being handled with the hands is put into the counter-mould, which then you muſt with the upper-part preſs hard; that it may be made conformable to the mould, *viz.* plain, not long, that which may eaſily therefore be made; and for this cauſe thoſe crucibles are eaſily again taken out, *viz.* if the mould be turned, or the counter-mould be a little knocked againſt the ſides of the form. And if the earth be beaten in too faſt that it goes out at the ſides, you muſt cut it off with a knife, or elſe the crucible, or teſt is hardly taken out, ſticking to the brims, which practiſe will teach thee. For all things cannot be ſo accurately demonſtrated by a pen.

And take this for a caution, that thou do not make thy teſts and crucibles of earth that is too ſoft, but of that which is half dry, otherwiſe they are hardly taken out of the moulds; for that is more eaſily and rightly applyed to the mould. And if thou proceed rightly according to the preſcript, ſcarce one crucible of a hundred will be loſt.

This alſo is to be obſerved, that the ſuperfluous earth which is cut off muſt not be mixed again with the maſs for crucibles, becauſe it is ſpoyled with the fat, or oyl that is ſmeared over the moulds, and therefore cannot be ſo well mixed again, and being burnt cleaves, for which cauſe bad crucibles are made. Wherefore it is to be kept apart for mending of furnaces that are ſpoiled with an extraordinary heat of the Fire; or for covers of crucibles that are to be made by the help of the hands only, or of moulds, which we cannot want, if we would work all things exactly.

Now for tyles, and other veſſels that ſerve for diſtillation, and melting, they are made by the help of wooden moulds after this manner. Let the mould be made exactly like to the tyles, and other veſſels, then cut off leaves from the earth being very well prepared, with a copper wier upon two equal tables of wood, and then a piece of the earth is to be laid with a knife upon the mould, that it may there get ſome hardneſs; which afterward is to be taken away, dryed well, and burnt. And if any thing further is to be done, *viz.* by cutting off, or adding, it muſt be done by earth half dryed, or a little hardened. For by this means any one may get for himſelf earthen veſſels that are neceſſary,

without much coſt or pains for certainty ſake. For thoſe that are ſold, are negligently made, in which oftentimes in the drying, the cracks which are made, are filled up with ſome earthen liniment, before they are burnt, which therefore are not dura- in the fire, but are broken, and that oftentimes not without great loſs of the metal, which is again to be gathered out of the aſhes by the help of a tedious waſhing. It is better therefore to work thoſe veſſels with ones own hand for certainty ſake. For not all and every crucible can alwaies and every where be made equal, and be of a like durableneſs in the Fire, though they are made moſt diligently: and therefore a conſideration being had of their goodneſs, they may be uſed for divers uſes, and the better may be uſed in the melting of the better metals. But let no man perſwade himſelf that all theſe can indifferently hold in the Fire, although they be the beſt of all, how many ſoever you make; for I never yet ſaw any earth which could hold litharge in the Fire and ſalt of Tartar, becauſe the beſt that ever I ſaw is not free from penetration of them, which is the greateſt impediment of ſome profitable operations, which therefore are omitted.

And let this which hath been ſpoken, ſuffice concerning the making of crucibles: let every one therefore that hath a care of his buſineſs, uſe better diligence for the time to come in the making crucibles for more certainty ſake, and he will not repent of his labonr. Now how Teſts and Cuples may be exactly applyed to the aforeſaid Molds, is not my work at this time to ſhew, becauſe many years ſince it hath been done by others; eſpecially, by that moſt ingenious Man, *Lazarus Ercker*, whoſe Writings concerning the manner of making of Teſts and Cuples I cannot mend, to which Authors I refer the Reader, where he ſhall find ſufficient Inſtruction and Information concerning this matter. But there are alſo other Teſts, of which I ſhall ſay nothing in this place, but elſewhere happily I may, by the help whereof, lead is bettered in tryal if it be ſometimes melted again.

Of the vitrification of Earthen Veſſels belonging to the firſt and ſecond Furnace.

IN the defect of glaſs Inſtruments belonging to our firſt Furnace, you may make ſuch as are very uſeful, of the beſt Earth, which being well glazed, or double glazed, are ſometimes better than old Glaſs; eſpecially, thoſe that are made of Earth that do not drink up the ſpirit, ſuch as is found almoſt every where, which becomes ſtony being burnt: Now the Art of burning hath not hitherto been ſo well known, of which ſomething hath been ſaid already, where the Earth being burnt with a very ſtrong fire, is made ſo compact, as that it becomes hard and ſolid as a ſtone. The Potters Furnaces being too weak for this ſtrong burning, there is required a peculiar Furnace for this Work; in which, the ſtrongeſt fire for the burning of them may be made: But becauſe no body thinks to build ſuch an one, only for ſome few Veſſels not worth the ſpending of coſts and labours: there is yet another way of vitrifying of any ſort of Earth (red Clay only excepted) not to be ſlighted if well done; eſpecially, if the matter vitrifying when it is cold after the burning is ended, doth not cleave and chop, and it is not hurt by corroſive ſpirits as the glaſs made of lead, retaining ſpirits, as well ſubtle as corroſive, as that white vitrification of the *Italians* and *Hollanders*: you muſt therefore in defect of a fitting Furnace, wherein Veſſels being burnt become ſtony, make them of the beſt Earth, and glaze them with the beſt Glaſs of Tin, but not of Lead; and by how much the more the calx of Tiu goes into the vitrifying mixture, ſo much the better is it made; for Tin being reduced into a calx with Lead, hath no more affinity with corroſive ſpirts; wherefore it is more fit for vitrification. But he that will not be at ſo much coſts, let him vitrify with Venice Glaſs powdered, which vitrification alſo is not to be ſlighted, requiring a very great heat for the burning, and therefore flowing with great difficulty in theſe common Potters Furnaces; wherefore you muſt mix ſome Borax with the Glaſs, that it may flow ſo much the more eaſily in the Potters Furnace; elſe you muſt pour upon the earthen Veſſels being burnt, Water mixt with Glaſs, ſo that it the Glaſs may ſtick to them every where exactly, which afterwards being well dryed, ſhall be gathered together into one heap artificially, leſt they take up too great a ſpace, like earthen Diſhes that are to be burnt, and afterwards compaſs them round about every where with burnt Bricks, an hole being left open above for the caſting in of coals, yet ſo, that the Bricks be diſtant from the Veſſels the breadth of an hand, whereby the coals being caſt in above, may the more freely go round about down to the bottom; which ſpace being filled with dry coals, you muſt put upon them other living coals, that the fire being kindled above, may by little and little burn downward and perform its work; which being ſo done, the Veſſels will be out of all danger, if ſo be they are all well dryed.

The fire being kindled and burning, you muſt cover the hole with ſtones, until the fire of its own accord be extinguiſht; the coals being ſpent and the veſſels become cold.

N. B. Now if there be a great heap of veſſels, you muſt firſt, the coals being burnt, add freſh coals once more; for elſe the veſſels being placed in the middle, cannot be ſufficiently burnt, nor the glaſs ſufficiently flow; wherefore caution is required in the governing of the fire in this manner, where, if all things are rightly done, the veſſels are better and more truly burnt and vitrifyed than in any common Potters Furnace whatſoever; yet with greater danger to the veſſels than in a Potters Furnace compaſſed about with walls. But let him that burns crucibles and other ſmaller veſſels, burn them in our melting or diſtilling Furnace, being covered wirh coals, giving Fire firſt above, for ſo I my ſelf was wont hitherto to burn all my crucibles, and burn and glaze all other diſtilling veſſels; and this in defect of fitting Furnaces is the beſt way of burning and vitrifying, where in three or four hours ſpace, the veſſels are exactly burnt and vitrifyed. Now the earth that is to be burnt quickly, muſt be the beſt, and durable in the Fire, for fear of breaking of ſome of the veſſels. Let him therefore in this caſe for ſecurity ſake, uſe our fourth Furnace, who hath built it with his chambers, in the firſt whereof he may burn and vitrify without any danger. But that foreſaid way of burning and vitrifying, is not to be ſlighted; wherefore I would have thee be admoniſhed to be cautious in giving of Fire, that you give no more

or

or leſs than you ſhould, leſt afterwards you impute the cauſe of your errour committed, to me, whilſt the veſſels are broke as if I had not wrote the Truth, but to thy ſelf that erreſt, and muſt for the future be more diligent, and cautious in this work.

I know other vitrifications of divers colours hitherto unknown, and indeed moſt ſecret, not to be communicated to every one indifferently: but he that knows how to reduce metals into a true glaſs, retaining the colour of its metal, is indeed the inventor of a very great ſecret; to whom, if he conſider the matter more profoundly, and exerciſe himſelf therein, a Gate is open, with the bleſſing of God, to a greater light.

There are alſo other vitrifications, with which the earth being covered doth appear, as if it were adorned with Gems; but becauſe it is not our purpoſe now to treat of ſuch kinds, I ſhall make an end of vitrifications, one only excepted, which I ſhall communicate for the ſake of the Sick, and Phyſitians; and it is this:

Make little earthen Cups very ſmooth and white of the beſt earth being burnt: then make the following glaſſe to flow in a very ſtrong crucible, in which dip one cup after another, being held with tongs, and firſt made red hot in ſome little Furnace, letting them lye covered therein for a while, that the earth may the better attract the glaſs; which being done, let them be taken out, and be ſet again into the foreſaid collateral Furnace, where they were before made red hot, when one is taken out, dip another in the molten glaſs in its place, which alſo is again to be ſet as the firſt into the aforeſaid Furnace; and this is to be reiterated ſo often, until all the pots be covered over with glaſs: all which being done, the Furnace is to be ſhut cloſe every where, that the wind enter not into it, and ſo it is to be left until it become cold of it ſelf, and the glaſs covering over the cups remain intire, which otherwiſe cannot be if the cups be ſet in a cold place; now the glaſs is made after this manner.

Take of crude Antimony two parts, of pure Nitre one part; grind them well being mixt together, kindle the mixture being put into a crucible with a red hot iron, and the Sulphur of Antimony will be burnt together with the Nitre, a maſs of a brown colour being left behind, which you muſt take out while it is hot with a ſpatle that it may cool, which afterwards being melted in another ſtrong crucible for the ſpace of half an hour, or an hour, makes that glaſs with which the aforeſaid cups with their covers are covered over.

Of the uſe of the aforeſaid Cups.

THere is no one that can deny that Antimony is the moſt excellent of all vomitives, wherefore, ſo many and ſo various preparations have been invented by Phyſitians for the taking away of the malignity thereof; whereof I have ſhewed ſome, together with the uſe thereof in the Firſt and Second Part of this Book, where alwaies one is better than another; yet notwithſtanding 'tis confeſt, that Antimony reduced into Glaſs, is ſufficient to purge the Stomack and Bowels from all corrupt Humors, and that without all danger, (being rightly adminiſtred) as well by vomit as by ſtool, by which means many grievous immineut Diſeaſes are not only prevented, but alſo preſently are cured.

But you infer, that this is yet a crude and imperfect preparation, and therefore not ſo ſafe. To which I anſwer, that Antimony that purgeth, needeth no preparation, for if all the crudity thereof were wholly taken away by fixation, it would no more cauſe vomiting or ſtools; wherefore the aforeſaid glaſs of Antimony is not to be feared, becauſe it is not dangerous, but may ſafely be given to Children that are one or two years old, but not in form of a powder, but in infuſion or extraction of its chiefeſt vertue made with honey, ſugar and wine, ſweet or ſowre. After which manner being given, it attracts from all the bowels all vitious humours, and evacuates them as well upward as downward, without danger; of which thing elſewhere more at large. Let him that uſeth the aforeſaid Cups, infuſe one or two ounces of wine, and ſet them a whole night in ſome warm place, and the wine will attract from the glaſs ſo much as doth ſuffice it, which afterwards being drank in a morning, doth perform the ſame as an infuſion made with the powder of Stibium; and this is a more delicate way than the other, becauſe a Cup is ſent to the Patient that he may infuſe in it the ſpace of a night, two or three ſpoonfuls of proper wine, placeing it in ſome warm place, which he may drink up blood warm in the morning, with a due ordering of himſelf afterwards: Which, in my judgment is a more delicate way, being made with ones one wine, and ones one hand, than that tedious way of potions, both large, bitter, and nauſeous. And this Cup may oftentimes be uſed, and if at length the wine ſhould not attract ſufficiently, the Cup with the wine is to be ſet in ſeething hot water for a little time, that the wine might the better attract, and work, when need ſhall require. Now he that gives ſuch kind of Cups to others, muſt inſtruct them concerning the ordering, and adminiſtring of the ſame. One Cup is ſufficient for the Maſter of a Family, with his whole Family for all the daies of their life. It is not to be uſed by all, and every one, and in all Diſeaſes indifferently, but only by thoſe that are ſtrong and young; and where the principal parts are not hurt. Cups may alſo after another way be covered over with Glaſs without Antimony, as follows.

Sublime *Auripigmentum* in a Glaſs or Earthen Gourd; and take the gallant golden coloured Flowers thereof, which being after a peculiar manner melted, yield a red and moſt beautiful Glaſs almoſt like an Oriental Ruby, which being broken in pieces, may be uſed in ſtead of an Ornament; but this is more ſoft, and brittle, than Glaſs of Antimony. This Glaſs, or thoſe Flowers of *Auripigmentum*, which are not yet reduced into Glaſs, do notably glaze the aforeſaid Cups with a red beautiful Colour.

He therefore that will vitrify the aforeſaid Cups, muſt firſt heat them red hot in a Fire made with Coals; and being thus hot, dip them in the aforeſaid melted Flowers, and being taken out thence, put them under an earthen, or iron red hot veſſel, and there let them cool; which do perform the ſame things as thoſe which are ſaid of the Antimonial Cups.

Theſe Cups are not dangerous, as to be feared, becauſe as Antimony is corrected by calcination, ſo *Auripigmentum* is by ſublimation: from which, if all the malignity be taken away either by Fire,

or by nitre, the vomitive vertue is taken away, as afterward ſhall be demonſtrated more at large in theſe five parts, when they ſhall come forth again with enlargements, *viz.* what purging things are, and how they put forth their vertues, a conſideration being had of their malignity.

There are alſo other ways of vitrification, and indeed very fine, and moſt deſireable by all, if they ſhould be communicated; but becauſe it is not now my purpoſe to treat here of mechanical things, but only of ſome particular vitrifications of veſſels belonging to our furnaces, I am reſolved to omit them at this time, and make an end of theſe things. I am reſolved, God willing, to ſet forth theſe parts more corrected, and in a larger manner, where many excellent things now omitted for ſome reaſons, ſhall be publiſhed, and communicated.

Wherefore I will now put an end to this fifth part, where although I might have added ſomething that is ſingular concerning artificial furnaces, yet becauſe time will not now permit, it ſhall be deferred to another time and place, where we ſhall treat further of the examining, trying and ſeparation of metals: For the beſt way of melting of metals in a greater quantity hath not yet been known: And although they that deal in minerals perſwade themſelves of the perfection of their art, yet I can demonſtrate an eaſier, and more compendious way of melting of metals in a ſhorter, time, in a greater quantity, and with leſs coſts and pains. Of which more at large elſewhere, wherefore (Courteous Reader) be contented with theſe things, and if I ſhall ſee that theſe few things ſhall be acceptable to thee, I will ſometime hereafter for thy ſake and to thy profit communicate *wonderful ſecrets* which the world will not believe, and which hitherto are hid, either out of envy or ignorace.

FINIS.

AN APPENDIX.

TWo years ſince I began to publiſh my new invented furnaces where alſo there was mention made of ſome ſecrets, which though I thought never to divulge; yet nevertheleſs I underwent many troubles for the communicating of them. Wherefore I beſeech every body that they would no more create troubles to me or to themſelves by their petitions or writings, becauſe for certain cauſes I ſhall for the future communicate nothing but thoſe things which follow. Expect therefore patiently the time of another Edition, when theſe five parts ſhall come forth more corrected and enlarged, and many moſt choice ſecrets ſhall be communicated, which were for certain cauſes omitted in the firſt Edition.

I ſhall now God willing communicate thoſe things which follow, yet upon this condition (becauſe many are ſuch, that by means thereof thou maiſt with a good conſcience, without hurt to thy neighbour, through Gods bleſſing, get great riches) that thou be mindful of the poor, and a good ſteward of riches got honeſtly, and uſe them to the glory of God and the eternal ſalvation of thy ſoul.

The preparation of corn, as of Barley, Wheat, Oates, *&c.* of Apples, Pears, Cherries, *&c.* where fermentation being made they do yield by way of diſtillation a pure ſpirit very like to the ſpirit of wine without great coſts; of the remainders whereof if the matter were corn, may be made good beer, or vinegar; but if the matter were any kinde of fruit, as apples, pears, a very good drink like to wine, ſo that by this means thou maiſt find a double profit, by which thou maiſt not only have whereby to live honeſtly, but alſo to lay up for thy heirs.

An excellent and wholeſome drink of fruit, and corn, that is durable and like to Spaniſh, French, and Rheniſh wine.

A diſtillation of the *Aqua vitæ* of certain vulgar things not coſtly and like to the *Aqua vitæ* of French and Rheniſh wine.

A preparation of ſugar like to the Weſtern, and of tartar like to the natural Rheniſh, out of honey and not coſtly; where one pound of ſugar doth not exceed the price of eight or ten ſtivers, and a pound of tartar, that doth not exceed the price of two ſtivers.

A peculiar purification of crude tartar without loſs, and a reduction of it into great cryſtals not coſtly, ſo as the price of one pound doth not exceed ſix ſtivers.

The taking away of the ingrateful taſt and odour of honey ſo as afterwards there may be made from thence a certain good *Aqua vitæ* retaining no more the ſmell and taſte of honey: alſo a very good Mead or Methegline like unto very good wine, with which

which the ſame things may be done as with the beſt wine.

A preparation of Mead out of raiſins, great and ſmall, very like in all things to Spaniſh wine; out of which alſo is made a very good vinegar without great coſts.

A preparation of wine and good vinegar of wild grapes.

Durable and wholeſome drinks of gooſeberries, barberries, mulberries, ſtrawberries, and the like.

The mending of troubled acid muſty wines, *&c.*

The preparation of a very good vinegar out of certain vegetables which are to be found every where, which may be compared to that which comes out of France, and in a great abundance, whereof two rundlets of nine Gallons do not exceed the price of one Royal. [A Royal or Imperial is 4 *s.* 6 *d.*]

The promoting of the ripening of wines of the cold countries of Europe (a very few that are very cold being exempted) that they may yield very good ſweet and durable wines, whereas otherwiſe they could come to no maturity, being very like to thoſe which hotter countries yield.

A certain ſecret way of carrying wines from mountainous places, where carts, ſhips, and other commodities are wanting, where the carrying of ten pipes, doth not exceed the price of one pipe otherwiſe carryed, ſo that by this means, outlandiſh wines may be brought to any place with great profit.

A very good and eaſie preparation of verdegreaſe out of copper, whereof one pound doth not exceed the price of ſix ſtivers.

A new and compendious diſtillation of vinegar, of which a rundlet of eighteen gallons doth not exceed the price of half a ryal, with which many things may be done, eſpecially the cryſtallizing of verdegreaſe, of which one pound prepared after this manner, doth not alſo exceed the price of half a Royal.

A compendious and very eaſie way of diſtilling a very ſtrong ſpirit of urin, and that without any coſt and pains, ſo that twenty or thirty pints ſhall not exceed the price of one royal, being very excellent in medicine, Alchimy and Mechanique affairs, by the help whereof a moſt beautiful blew vitriol may be made out of copper, being very profitable in Alchimy and medicine, making ſilver ſo fuſible, that by the help thereof, glaſs veſſels, as baſons, diſhes, and candleſticks, *&c.* may be ſo guilded as to be taken for ſilver.

A way of diſtilling the ſpirit of ſalt in a great quantity, and that with ſmall coſts, ſo that one pound thereof will ſcarce exceed the price of ſix ſtivers being very excellent in Alchymy, Medicine, and other Arts; eſpecially for the doing of theſe following things, *viz.* the ſeparation of gold from ſilver without hurt to the Cups or other things, alſo the ſolution and ſeparation of gold mixt with copper and ſilver by the force of precipitation, where the *Menſtruum* that is preſerved, may again be uſed for the ſame uſes, which ſeparation is the eaſieſt of all other humid ſeparations, whereby gold is reduced to the higheſt degree.

The ſeparation of volatile ſparkling gold out of ſand, *&c.* very profitable, without which otherwiſe it could never be ſeparated, neither by the help of Waſhing, nor by Mercury, nor by the force of Melting.

An artificial ſecret, and hitherto unheard of, trying of ſtubborn Metals, finding out their Contents, which otherwiſe could not be found out: for oftentimes there are found golden mines, which are ſtubborn, in which nothing is found out by the common way, and therefore they are left unlaboured in, and ſometimes elſewhere, where there are not found Mines of Metals, there are found other things, as white and red talc, that yield nothing, being tryed the common way, or very little, all which yet abound with gold and ſilver, which may be ſeparated this way.

A new, and unheard of compendious way of melting Mines in great plenty, where, in the ſpace of one day, by the heat of a certain ſeparating Furnace, more may be melted than by the common way in the ſpace of eight daies, where not onely coſts are ſaved, but alſo is hope of greater gain.

Another way for the better proving of things melted, and a new way of ſeparating ſilver from lead.

A very ſpeedy way of melting Minerals, whereby they are melted in great plenty, by the help of Pit-coals in defect of other coals.

The fixation of Minerals, Sulphureous, Arſenical, Antimonial; and others that are volatile, which cannot be retained and melted by the force of fire, by the help of a certain peculiar furnace with a grate, ſo that afterwards they may by infuſion yield gold and ſilver.

The getting of gold and ſilver, that ſparkles, and is rarified, out of ſand, pure clay, flints, *&c.* by the help of melting.

The ſeparation of gold lying hid in baſer minerals and metals moſt profitable, which cannot be done the common way.

A very quick Artificial and eaſie ſeparation of melted gold and ſilver by the help of fuſion, ſo that in the ſpace of one day, by the help of one furnace, ſome hundreds of Marks may be ſeparated with far leſs coſts and labour, than by the common way by cement and *Aqua fortis.*

The reduction of elaborated gold, of chains and other ornaments unto the higheſt degree; alſo the ſeparation of gold from guilded ſilver, by the help of fuſion, by which means a hundred marks are more eaſily ſeparated than twenty of the common way.

A certain way whereby more ſilver is ſeparated from lead then by the Copper.

A ſeparation of good gold from any old iron, which although it be not a labour of great gain, yet it is ſufficient for thoſe who are contented with a few things.

A ſeparation of gold and ſilver, from tin or copper, according to more or leſs. The maturation of mines, ſo that they may afterwards be able to yield more gold and ſilver, then by the common way, alſo the ſeparation of gold and ſilver out of Antimony, Arſenick, and *Auripigmentum.*

The ſeparation of the external ſulphur of *Venus*, that the Son *Cupid* may be born.

The ſeparation of ſilver from the cuples, into which it enters in the tryal without melting or any other labour or coſt.

The preparation of divers earthen things to be done in any part of the world, like to the Porcellan, that hold fire and retain ſpirits.

A certain Allome exalting and fixing any colour, eſpecially requiſit for ſcarlet and other pretious colours, with a certain perpetual cauldron, that doth not alter colours, and is not coſtly.

A making of colours for painters, as of purple

gum, ultra-marine, not coſtly, and eſpecially of that rich white, never before ſeen, like to Pearl and Margarites; alſo a peculiar colouring of gold and ſilver.

To conclude, I refer the Reader unto the Reſidue of my Books, that Treat of thoſe Secrets more plainly; which I am reſolved ſhortly to put forth.

Thoſe Secrets are all openly taught in the following Treatiſes, as in the Explication of Miraculum Mundi, Apology againſt Farner, Proſperity of Germany, &c.

FINIS.

Of the Tincture of Gold,

Or, the True

AURUM POTABILE:

What it is, and how it differs from the falſe and ſophiſticated Aurum Potabile: How it is to be Spagirically prepared; And how to be uſed in Medicine.

Of Aurum Potabile.

THere is no man that can deny, that the true and ancient Philoſophers did ſtudy long life, and the conſervation of their health. Whence it came to paſs that they did diligently ſeek out the ſubject of preſerving health, and prolonging life: wherefore by the help of fire they did practiſe the ſeparations, and proofs of all vegetables, animals, and minerals, ſeeking out their powers and vertues: Who found out the greateſt harmony of all things as well in the heavens, as on earth, betwixt the Sun, Gold, Man and wine. For it cannot be denyed, that the life of all things proceeds from the heat of the Sun; wherefore they ſought to unite gold the terreſtrial ſun or body fixed and perfect, cauſed by the rays of the ſun, with man by the help of ſpirit of wine.

But haply there will be ſome, whom this my narration may offend denying that gold is the Son of the ſun, or a metallick body fixed and perfect, proceeding from the rayes of the ſun; asking how the ſolary immaterial rayes can be made material and corporeal? But they are very ignorant of the generation of metals, and minerals. And although I am not now reſolved to write of the generation, and original of metals, yet endeavouring to demonſtrate that that there is a vivifying power of the ſun to be found in gold (deſtroyed and volatilized) and to be prepared into a moſt wholeſome medicine for man, I will not omit for the ſake of the ignorant and incredulous, to demonſtrate the truth by one or two examples, which although I could demonſtrate by moſt certain and firm reaſons, yet for brevities ſake I am now reſolved to omit them, recommending to the ſearcher of the Nature, and propriety of metals, my treatiſe *De Generatione Metallorum*, which without doubt will take away all ſcruple from him; objecting only againſt him that oppoſeth the truth, two queſtions and reaſons which are to be confuted: and the firſt is, whence comes that increaſe of both the quantity and quality of any viſcous, mineral liquor, that hath been expoſed long to the ſun

Sun in an open glaſs veſſel? Whether from the Sun, or elſewhere? But thou ſayeſt, that that encreaſe comes from the air, the vehicle of all things. I anſwer, if from the air, whether was not that air impregnated by the Sun? and whether there be any thing in the air, which it received not from the ſtars? But place this liquor in a cold Cellar, in a moiſt air, and thou ſhalt by experience know that no weight is added thereto, even as in the Sun, or (in his ſtead) fire: that Liquor will draw ſome phlegmatick moiſture which will be eaſily ſeparated by heat, the weight of the former liquor being left. This may be ſhewed by this Example: diſſolve ſome ſulphurous metal, as Iron, Copper, or Zinck, with any acid ſpirit, and at length take away the ſpirit, make the remainder red hot; yet not too much, but as much as ſufficeth to take away the ſpirits, which afterward (its weight being obſerved) put in a crucible on the fire, but take heed leſt the metal run over, but at length let it darkly glow with the crucible, for the ſpace of three or four weeks, which done, take it away again, and weigh again the metal, and thou ſhalt find the evident encreaſe of the metal, which thou ſhalt perceive more evidently by this way, as follows: Put copper, or ſome ſulphurous metal, with 16 or 18 parts of lead in a well-burnt cupel; made of the aſhes of wood or bones, in a tryed furnace, (the weight of the cupel, copper, and lead firſt exactly obſerved) and cauſe the copper to evaporate by fire with the lead, which done, take the cupel when it ſhall be cold, and again weigh it, and thou ſhalt find it far more weighty, ſo that its weight (though much of the lead goes into air in the cupellating) not only exceeds its former weight, but alſo of the copper and lead by the ſaid cupellation; therefore it is juſtly demanded whence this Encreaſe proceeds, whether the heat of the fire was not coagulated into a metallick body by means of that melted metal? Therefore it is probable, that if you knew the metallick matrixes in the ſurface of the earth, in which the beams of the Sun and heat of fire being received, may be coagulated, metals may as well be generated in them, as in the bowels of the earth.

But thou replieſt it is probable the heat of vulgar fire to have ſomething metallick in it, which comes by attraction of the melted metal in the Cupel, but not in the Sun-beams.

He that will thus try the truth, let him put a cupel very well burnt in the beams of the Sun, together with copper and lead, to which let him apply a hollow Looking-glaſs, ſo that it may be operated upon by the Sun-beams gathered into a center, and may thence be made hot: But thou muſt continually hold the Looking-glaſs in thy hand, that thou maiſt turn or direct it to the Sun, according to the courſe thereof, leſt the cupel wax cold, the beams of the Sun being turned away, but if it be rightly obſerved, the work ſhall be done no leſs than in a furnace of fire with glowing heat.

You muſt have a Looking-glaſs at leaſt in diameter two feet, nor muſt it be too deep; but be in depth the 18 or 20 part of the globe, that ſo it may the further caſt the beams: it muſt be very artificially ſmoothed, that it may more exactly gather the beams to the center. Now the preparation of theſe burning-glaſſes is not of this place, but in the fourth part of our Furnaces, where we have taught not only how they are to be made of metals, but alſo of glaſs, and how poliſht and uſed.

This demonſtration, which might be otherwiſe omitted, is therefore ſet down, that it may be known how Gold proceeds from the Sun, and is ſecretly endued with its proper ſtrength and proprieties, by Chymiſtry, reducible into that which it was before its coagulation, namely, into a heating and living ſpirit, communicating its ſtrength and faculties to man's body. Therefore the Ancients uſed great diligence in the reduction of gold, in which nothing is found more excellent than the pureſt and fineſt ſpirit of wine made by diſtillation, and they did not uſe commou gold melted out of ſtones, or waſht out of ſand, but purged by benefit of fire, and Philoſophically quickened and unlocked, not by help of corroſive ſpirits, the uſual way of vulgar Chymiſts, but by ſome water which Nature freely gives without help of violent diſtillation; by which they manifeſt that which is hid in gold, and they have hid what is manifeſt, and therefore they have made it fit for the ſeparation of its tincture from a groſs and black ſuperfluous body. For they knew that the compact body of gold hath no affinity with the vital Spirits, therefore they have choſen only the fineſt part of gold to their Elixir, *viz.* Its tincture, which they have radically joyned with the ſpirit of Wine, and being joyned, have made them ſpiritual or volatile, ſo that neither can be ſeparated from each other in the fire, and being in the fire, are ſublimed, or fixed by a longer digeſtion, and coagulated into a fixt ſtone, which they count for the greateſt treaſure in this World. Therefore the ancient Philoſophers affirming, that there is not a better medicine under the Sun than it, which is made from the Philoſophical union of wine and gold, both by an inſeparable recoagulation and fixation; nor without gold can ſpirit of wine, nor this without it be made a medicine, becauſe gold without ſpirit of wine cannot be made volatile, nor this be coagulated and fixt without it. We therefore, their Poſterity juſtly, follow the opinions of the moſt famous men, not for their authorities ſake, but for ocular demonſtration, which is the trueſt tryal.

Therefore the knowledge of the preparation of this medicine being beſtowed on me from the higheſt, I have intended, becauſe a man is not born for himſelf, briefly to deliver its preparation and uſe: but I will not caſt pearls before ſwine; but I'le only ſhew the way to the ſtudious ſearchers of the work of God and Nature, who doubtleſs will underſtand my writing, but not the ignorant and unskilful; let therefore the brevity of the preparation offend no man, becauſe I mean not to proſtitute this Art (divinely obtained, not with idleneſs, but with much watching, labours and pains) nor give to the unworthy a bit before chawed, but only to communicate it to the pious, who ſhall ſee with open eyes, that the thing is ſo. I deſire therefore, the ſimplicity of my ſtile may offend no man, being not adorned with rhetorical figures, after the wonted manner, for truth wants not many and elegant words, being contented with ſimplicity and brevity, with which it is eaſier and better demonſtrated, than with thoſe intricate and ſophiſtick diſcourſes.

℞ of living gold one part, and three parts of quick Mercury, not of the vulgar, but the Philoſophical every where to be found without charge;

and labour, (thou maiſt alſo add living ſilver of equal weight with the gold, and indeed better than only gold, for the greater variety of colours proceeding from the mixture of male and female: but one perſwaded that a better Tiucture proceeds from gold alone may mix gold only, not ſo, one skilful of metals, who knoweth the power of the cordial union of gold and ſilver, diſſolved in one and the ſame *Menſtruum)* put them mixt in a Philoſophical veſſel to diſſolve, and in the ſpace of one quarter of an hour, thoſe mixt metals will be radically diſſolved by the Mercury, and will give a purple colour; after encreaſe the fire by degrees, and it will be changed into a very fine green, to which taken out, pour the water of dew to diſſolve, which may be done in half an hour, filtre the ſolution, and abſtract the water through a glaſs alembeck in B. which pour out again afreſh, and abſtract, which do three times, in the mean time that greeneſs will be turned into a black colour, like Ink, ſtinking like a carcaſs, and therefore odious: and it behoves ſometimes to take away the water reaffuſed and digeſted, and that blackneſs and ſtink will depart in the ſpace of forty hours, and will produce a pure milky whiteneſs, which appearing, take away all the moiſture till it be dry, which will be a white maſs, and in few hours of a pleaſant colour, divers colours firſt appearing, it is turned into a fine greeneſs better than the former, to which you muſt affuſe the ſpirit of wine well rectified, to the depth of two or three fingers, and that green gold diſſolved will draw that ſpirit of wine, for the great amity, like a dry ſpunge drawing waters, and will communicate to it a quinteſſence as red as blood, by which means the greeneſs is deprived of its quickening tincture, the ſuperfluous aſhy body being left.

You muſt decant and filtrate the tinged ſpirit, and in a B. by a glaſs alembeck, abſtract it from the red tincture, attracting the fiery eſſence of the ſpirit of wine, ſo that they may be very cloſe and inſeparably conjoyned, from which an unſavoury water only diſtils, the vertue of the ſpirit of wine being left with the tincture of gold like a red fiery ſalt, fuſile and volatile; of which grain 1. can tinge ℥ i. of ſpirit of wine, or any other liquor, with a blood-red colour, for it is ſoluble in any moiſture; and therefore may be kept in a liquid form for the Panacea of moſt deſperate Diſeaſes. Now I will communicate the proprieties of the true tincture, by which true potable gold is known. This tincture next the ſtone is the beſt of all medicines, between which and that, there is but this difference, the ſoul of gold is volatile, nor hath entrance into imperfect metals, and therefore cannot tranſmute into pure fine gold, which vertue is attributed to the Philoſophers ſtone. The ſoul of gold, though it be the beſt part, yet it is not fixt in fire, but volatile; but the Philoſopher's Stone is fixt in fire, and remains, by reaſon of a longer digeſtion. But whether that ſoul or volatile tincture and red Lyon may be fixt by help of fire, and turned into the Univerſal medicine, and tinging ſtone, that I know not, becauſe hitherto I have not tryed, *&c.* therefore he may who extracts the ſoul of gold, make further tryal, whether he can find any thing better. For this Work treateth of nothing but the beſt medicine of gold, but other things I know not.

Therefore the deceit of the Diſtillers of Wine, and other vegetable waters, ſelling potable gold, is not unknown, being not aſhamed to ſell any water coloured yellow or red to the ignorant for a great price. And the errour of others diſſolving the body of gold in *Aqua Regia*, or ſpirit of ſalt, which again they abſtract to a dry remainder, to which for extraction they affuſe the ſpirit of wine: Which is not an extraction, but ſome particular ſolution of gold, made by help of the corroſive ſpirits left in the gold, tinging the ſpirit of wine with a yellow colour, which ſo coloured, they call their potable gold; which notwithſtanding is reduced into gold, the ſpirit of wine being abſtracted, which can do no more than any other Calx of gold, which the *Archeus* cannot digeſt, but ſeparates, being indigeſted, with the Excrements. And alſo it is the errour of others, ignorantly deceiving themſelves and others, extracting the Calx of gold with peculiar *menſtruums* and ſpirits, knowing not that the *menſtruum* affuſed to gold to be red of it ſelf by a long digeſtion, which decanted, they adminiſter inſtead of potable gold, who if they weighed the remaining Calx, would by experience ſee that nothing departed from the gold; which you may try by the ſetting the ſpirit or *menſtruum* in a remiſs heat, or longer in cold, which of it ſelf doth wax red, as if it had been affuſed to the Calx of *Sol.* But the cauſe of this redneſs is (unknown to them) nothing but a certain nitrous ſalt and volatile, as of Antimony, Urine, Tartar, Hartshorn, Hair, *&c.* exalting the colour of any Sulphur.

Wherefore it neceſſarily follows, if *Artiſts* mingle with the ſpirit of wine in which is a ſulphur, ſuch exalting ſalts, that it will thence be exalted in colour, and wax red; which alſo happens to them, who uſe to extract a tincture with diſtilled Oyls, having a volatile ſalt, as are oyl of Lemmons, Cloves, Soot, *&c.*

For ſuch-like tincture or potable gold is ineffacious, as experience witneſſeth. But I would not ſay there is no other tincture to be prepared out of gold, beſide this tincture: for being diſſolved in ſweet *menſtruums*, that it cannot be ſeparated by precipitation, it can do wonderful things in many grievous Diſeaſes; but alwaies the living metal is to be choſen inſtead of the dead.

But true potable gold is not ſo only in name and ſhew (as are divers waters tinged with a yellow or red colour) but alſo endued with golden faculties and vertues, ſo that it may actually appear to be made of gold, but irreducible by Fire into Gold, ſpiritual and penetrative, ſtrengthning the vital ſpirits, that they may overcome their enemies. But it muſt alſo be endued with this Vertue, that it may change imperfect metals, chiefly Mercury, Lead, and ſilver into pure gold; not truly like a fixt tincture, tinging with profit the baſer metals in flux; but only perfecting particularly in a moiſt way by digeſtion, where ſome part of the metal alone is turned into better. For this tincture of ſalt or gold is very volatile, ſo that it cannot reſiſt the fire; but with a gentle heat it melteth like wax, and is ſublimed like red ſalt, ſoluble in ſpirit of Wine, that it may be fit for Phyſical uſes.

Alſo true potable gold being taſted, is neither corroſive, nor aſtringent like other ſolutions of gold: neither doth it pollute the hands, the nails and hair with a black or yellow colour, but rather makes them

them more fine; neither doth it infect copper, tin, lead, with ruſt or a black colour, but rather makes them more clear; neither is it a body of gold reducible by extraction, nor into white gold, which may recover its former colour by Antimony, and *Aqua Regia*, but it is like an aſhy earth, and ſublimable in a gentle heat like Arſenick, not enduring the tryal of the cuple, which vertues if it have, it may be called the true Tincture of Gold: but if not, not ſo, but rather a ſophiſticated potable gold, not to be medled withal.

Of the medicinal uſe of this golden Medicine.

WE have before demonſtrated the ſun to be the original of gold, or endued with the incredible vertues of the terreſtrial ſun. For the ſtrength and vertues of all vegetables, animals and minerals lie hid in it; which cannot be manifeſted but by a Philoſopher, and that by ſeparation, to wit, of the intrinſical and pure parts, from the impure.

This ſpeech will happily ſeem to thee incredible, or not very likely to ſay that gold is reducible into a ſpiritual eſſence, agreeable to humane nature, endued with the ſtrength of all animals, vegetables and minerals. Surely thou ſhalt hardly perſwade him whom *Vulcan* hath not made a Philoſopher to believe it. But who will trouble himſelf ſo much as with ſure reaſons to decide all Controverſies, which if poſſible, yet for many reaſons is here omitted; but for ſureties ſake I will ſend back the Reader to the ſecond part of our Furnaces, where he ſhall find how out of Antimony and Sulphur, by a good Chymiſt, with the help of fire, may be drawn not only the force and faculty of divers vegetables, but alſo their natural odour; which yet did not appear in them before they were radically diſſolved, which if it may be done by any imperfect and fetid mineral, why not alſo by a perfect and mature mineral?

If we were good naturaliſts, and very diligent Chymiſts, then we need not to fill Elaboratories with ſo many pots and boxes, nor ſpend ſo much coſt in fetching in ſo many forreign medicinal ſpecies, becauſe without queſtion the ſtrength and properties of all vegetables, animals, and minerals, by an eaſier way may be found in ſome few ſubjects. And as the true tincture of *Sol* well fixed, is endued with all the vertues of all vegetables, animals and minerals; ſo alſo deſervedly is aſcribed to it the force of curing all diſeaſes; but with a difference. For there are divers kinds of the Gout in hands and feet, as alſo of the Stone and Leproſie; which ſometimes are inveterate and uncurable Diſeaſes, ſometimes new and curable. Who therefore, not mad, would promiſe to cure all and every diſeaſe indifferently, by any certain medicine? Certainly no man, although he had the very ſtone of the Philoſophers.

For oft-times the Stone of the Bladder is expelled or cut out, moſt hard and inſoluble by *Aqua-fortis*, which not any medicine not corroſive could diſſolve; which ſtrength, although they aſcribe to their medicine, yet they cannot perform it. Promiſes therefore do not ſuffice, which none can perform: for *Promiſes become Debts*, which is obſerved by few; wherefore by the haters of the Art the truth ſuffers, and the hope of good ſucceſs of Chymical medicines dyeth. *It is beſt* therefore *to perform more than promiſe*, and the work ſhall praiſe the workman. How can a Medicine penetrate to the extream parts of the body; to wit, the hands and feet, and diſſolve the coagulated matter waxing hard, which out of the Body no corroſive Medicine can diſſolve? It is ſufficient if a medicine finding a viſcous tartareous and ſalt matter, not yet coagulated, do diſſolve and expel it. The like is to be underſtood of the ſtone in the reins and bladder. In this manner I will aſcribe the curing of the Gout in the hands and feet, the ſtone in the kidneys and bladder, to my tincture of *Sol*, as well in old as young; but ſo that, if need be, ſpecifical Catharticks may be adminiſtred, and extrinſecally Bathes for promoting the cure, whereby Nature may the ſooner do its office. But above all things, we muſt not ſlight Divine Providence: For oft-times God ſmites us with a Diſeaſe incurable by Art, unleſs Divine wrath be firſt appeaſed *by humble Repentance*, which is the beſt medicine of all. As alſo the cure of all Diſeaſes coming of the corruption of the Blood, as the Leproſie, the French Diſeaſe, and other impurities; which are taken away by this tincture, if withal Catharticks and Diaphoreticks are adminiſtred, cleanſing and renewing the blood above all other medicines. This Tincture alſo takes away all the obſtructions of the Liver, Spleen, Kidneys, and other parts, becauſe it warms, attenuates, incides, and evacuates the original of divers Diſeaſes. It alſo cures all violent and acute diſeaſes, as the Epilepſie, Plague, Feavers, *&c.*

It provoketh the Menſtrues of old and young, chiefly, if alſo extrinſically it be rightly adminiſtred: which way many are well cured, who otherwiſe are like to periſh miſerably; it warms and cleanſeth the Matrix above all other Medicines, and renders it fit to perform its office: It preſerves it alſo from all accidents of *Sterility*, and other very grievous Diſeaſes, cauſing death. It expels the water of the Dropſie by urine, it rarifieth and dryeth up the ſuperfluous moiſtures of the internal and external parts, like the Sun drying and conſuming waters, by which means the body recovers its priſtine ſanity: of other diſeaſes to write in particular there is no need, becauſe in all and every one, without difference, it may be uſed as a general Medicine, in old as well as young. This medicine doth not only reſtore, but alſo conſerve health till the predeſtinated time.

The Doſe is from three grains or drops to twelve or more, but to Children 1, 2, or 3. with its appropriated vehicle, or in wine or beer to be adminiſtred daily, which Doſe may be taken oftener in a day, reſpect being had to the ſick party.

And ſo I make an end, hoping to have pleaſed my Neighbour: for without doubt, who uſeth this golden Medicine well, ſhall do well, chiefly lifting up his heart (acknowledging his ſins) to God the Giver and Creator of all good, in filial humility, imploring his help and bleſſing; which the omnipotent God and merciful Father, that he would beſtow on us his temporal bleſſing in this life with ſound health, and hereafter life eternal, of His free grace, *Let us pray, Amen.*

FINIS.

THE MINERAL WORK:

THE FIRST PART.

Wherein is Taught the Separation of

GOLD

Out of Flints, Sand, Clay, and other Foſſiles by the Spirit of Salt, which otherwiſe cannot be purged. Alſo a *Panacea* or Univerſal Antimonial Medicine, and the uſe thereof. Invented and publiſhed in favour of the Studious in the *CHYMICAL ART.*

By **John Rudolph Glauber.**

A Preface to the Reader.

THere will be ſome without doubt, becauſe the Edition of other Pieces (of which I made mention in ſome former Tractates a few years paſt) hath been hitherto by reaſon of diverſe journeys, and other various impediments, neglected, who will think (having no knowledge of me) that I am unable to perform my promiſe; and there are others, who knowing my Condition, and the Contumelies of my Enemies, will fear that I being diverted from my purpoſe by theſe Reproaches, will make void my ſecret promiſes. But I have reſolved to ſtand to my promiſe, that theſe men may ſee that I am neither moved nor altered with the Taunts of the Envious; but that they may be convinced by real demonſtration of my ſecrets; ſome of which, I ſhall now for the publick good endeavour to communicate. And although the ingratitude of the World be cauſe enough for my ſilence, yet the uprightneſs of my Heart would not permit me to conceal thoſe things, notwithſtanding the malevolent and ungrateful. Beſide alſo the following Reaſon moved me, becauſe there are ſome ambitious men, who falſly boaſt of the knowledge of diverſe of my ſecrets; wherefore, ſome have been moved to think that mine are not my own, but the Works and Writings of others; by which means I have been deprived of my due Praiſe, being attributed to another. And this I have often found, that one or other having by entreaties obtained a ſecret from me, have afterward through Oſtentation aſcribed it to themſelves.

There are others alſo who fear not to reproach me, and my Writings, as though they were trifles, not attaining their deſired end, who (rather than I who have written plain enough) are themſelves to be blamed, for being ignorant how to work. Such and other things might deter me, but I would not omit the publiſhing of theſe Writings for thoſe mens ſake who are pious and honeſt. Wherefore I openly affirm, that theſe things publiſhed by me are not only no trifles, but moſt true, and alſo my own, and not the Invention of another. And I call him a lyer, who ſhall boaſt himſelf the Author without any of my help. But of theſe enough! yet I would have the Reader know, that for the meaneſs of the ſtile, I am not like many Writers, who more look after the flouriſh of words than the thing it ſelf; I rather ſeek that my Neighbour may profit by me. Wherefore, for his better underſtanding, I had rather be prolixe in words, tedious to delicate ears, than write in obſcure brevity adorned with Rhetorical figures. For I know that the ſtudious in the Art do affect a prolixe, plain, and diſtinct information or inſtruction, rather than a Ciceronian *or obſcure. And now, in the Name of God, I will begin my Work which is moſt profitable to all, and will faithfully communicate and publiſh the ſame in that manner as it was written by me in my travel, under the title of* The Mineral Work, *divided into three parts. In the firſt of which ſhall be taught how out of ſand and golden flints, corporeal gold may be drawn by the help of Spirit of Salt. Which ſecret, although it may ſeem ſmall, yet it is that whereby (a knowledge of the true ſtones and true ſand being obtained) life may be ſuſtained, and alſo the coſt laid out may be recompenſed, as ſhall be proved in the following parts.*

In the ſecond part ſhall be treated of the original and generation of metals, and alſo of the deſtruction of Minerals and Metals.

In the third part ſhall be demonſtrated the poſſibility of metallicol tranſmutation by Nature and Art, and that with divers reaſons: which demonſtration is not (unleſs I am deceived) performed yet by any, being the foundation of all metallick Philoſophy, and the Golden Crown *of all my Writings. Which God grant I may perfect, to the glory of his Divine Name, and the good of my Neighbour.* Amen.

THE

The First Part of the

Mineral Work.

A most profitable process of the separation of Gold out of Flints, Sand, Clay, red and black Talk, and other Fossiles, containing very subtle Gold, thin and spongeous, which otherwise cannot be separated, either for its scarcity, or the obstinacy of the Mineral, by reason of the great Cost to be bestowed; viz. *very easily with the spirit of Salt.*

KNow first, (good Reader) that not all Sand, Clay, nor all Flints, and other Fossiles do contain Gold, but only some, without the knowledge of which, this secret availeth nothing. And because the knowledge of these are very necessary for the Artist, I will shew how they are to be proved, whether they contain Gold or not, that he labour not in vain, but that it may prove to his commodity or profit.

The madness of Men, searching after uncertain things is wonderful, but neglecting certain, although exposed to every ones view, for many seeking the perfection of Metals to gain Riches, are busied about an uncertain thing, because of a thousand scarce one obtaines his end: altho' they may be perfected and purified, I mean imperfect and impure metals, so that good Gold and Silver may thence be extracted, but this Art is given to few, neither is every one fit to perform the business; because it requires an ingenious and experienced ARTIST: But the thing which is certain, may be performed with small cost and labour by any vulgar Chymist, having any knowledge of the Art of fusion and separation, being an ingenious man, and not seeking things too high or too gainful at the first tryal. Be cautious therefore in the extraction of the aforesaid stones, for if thou shouldst with the spirit of Salt extract many of them, having no Gold without doubt thou shalt find no Gold there: And if thou shouldst extract some contained in them, and if thou be ignorant of the separation of it by Antimony, thou canst thence hope for no profit.

First then, the knowledge, *viz.* of those stones is necessary afterward of that separation by Antimony. Impute therefore the fault, if thou erreſt, not to me, but to thine own ignorance, if thou knowest not to extract the Gold; for I have written clearly, though thou shouldst not know any thing that were omitted. And I before admonish thee to be cautious in thy work, lest thou labour for nought: For it is certain, and no fiction, that in many places there are found golden flints, and golden clay, and sand, oft-times abounding with gold. And if they do not abound with it, yet may they be extracted with profit: but the flints abounding with it are extracted with greater gain. There are also found whole Rocks and Mountains of Gold, and great Mountains filled with golden Sand and Clay, not returning the charge of washing, either for its too great rarefaction or spungiosity and levity, by reason of which, its washed away with the sand; all which, how poor soever, may be extracted by the spirit of Salt with gain, and by Antimony fixed and purifyed. In brief, this is such a secret, by which, no man can be an impediment to another, as in other mechanical operations, whereof no man may be ashamed; for God did therefore create Gold in the earth and stones, that we may therefore extract it to the glory of His Name, and the benefit of our Neighbour; neither hath he forbidden the true and genuine use of it. I say therefore in truth, that I have here described this Art, how ever despised by the ignorant, yet of greatest moment, and almost incomprehensible. Now consider the thing a little farther, thou shalt find every where in the earth great Treasures to be hidden, which only through ignorance are not discovered. Truly it is known to all, that there is found golden sand and clay in diverse places, which for the aforesaid Reasons are left unlaboured, but by this our Art may easily be worked upon.

There are found also silver Mountains, out of which, silver cannot be extracted for the little weight it yields: there is also found in many places a certain yellow or reddish earth, or such like clay, which though it contain store of silver, yet it cannot be extracted with profit by this way, yet separable, with gain, but not by the spirit of salt,

which leaves it untoucht, but by ſome other thing, every where to be found in plenty, of which, for ſome reaſons we ſhall ſpeak nothing here.

And this way of ſeparation makes much for the poor mineral of copper, which with profit cannot be worked upon by the vulgar way, to be ſeparated from the Copper, afterward by ripening it into a better metal, or turning it into verdy-greaſe for want of a better art, which buſineſs alſo may well and honeſtly more than maintain a family. This way alſo may the rejected droſs of the gold, ſilver, and copper be with profit ſeparated. But becauſe I have decreed to handle here only the extraction of gold out of ſtones, therefore theſe menſtrues which are uſed in the extraction of copper and ſilver, are deſervedly omitted, and reſerved for another place, where ſometime they ſhall be delivered, to wit, if I ſhall ſee that this demonſtration ſhall be accepted in mens eyes, which more very excellent ſhall follow. As now I have undertaken a more excellent matter in love to my countrey, by which it may appear, that *Germany* however reduced to want, is yet rich enough, if it would but at laſt look upon its hidden treaſures. There is no need to offer a fore-chewed bit, for demonſtration is ſufficient, neither will we obtrude a good upon the negligent; for to the ungrateful the beſt things are unacceptable. Theſe therefore being waved, in ſhort we will give the demonſtration and extraction of thoſe flints, not doubting but the expert and experienced, though the ſluggiſh may not, will thence reap profit, and give God the praiſe.

What belongs then to the aforeſaid ſtones, out of which gold may be extracted, thus the matter ſtands. All kind of flints for the moſt part have inviſible gold, ſometimes viſible and inviſible, volatile and corporeal together: but many commonly contain impure iron-like volatile gold, and alſo mature, and a few, ſulphureous and copper-like.

Stones which the *Germans* call *Quartzens* and *Hornſtein*, containing pure and corporeal gold, although mixt with ſilver and copper, may be burnt and ground, and extracted with Mercury, and if they abound with gold, be purged by flux; which labours are uſual with diggers and dealers in metals, of which I do not intend to write, becauſe others have heretofore writ of them. But thoſe flints *Quartzen* and *Hornſtein* every where almoſt to be found, containing but a mean quantity of diſperſed iron-like Gold, Marcaſite-like, and that either fixt or volatile, cannot be ſeparated with gain, to wit, neither by Mercury nor by Flux, wherefore they are neglected by the Miners, either out of ignorance or for the intolerable coſts. But I having tryed thoſe baſe ſtones, that how little gold ſoever they poſſeſs; yet may it be ſeparated with great gain, I would not intermit to publiſh this knowledge for my Chriſtian neighbours ſake, not doubting but this publication will be profitable to very many. For I am not ignorant that there are as well learned, as unlearned, noble as ignoble, ſecular as ſpiritual, either by war or otherwiſe expoſed to poverty, ſo that they are hardly able to maintain their family, *&c.* and for their ſakes and others in want. I have publiſhed this ſecret, which rightly handled may bring no ſmall gain yearly, but eſpecially where thoſe ſtones are plentiful, and alſo that ſpirit of ſalt, whereof the deſcription is given in the firſt part of the Philoſophical Furnaces, and hereafter there ſhall be given a better, if nothing hinder; in the mean while uſe and enjoy theſe. And if it happen ſo that thou canſt not rightly perform all things of the aforeſaid tractate, bluſh not to learn the manual Operations [which cannot be ſo exactly deſcribed] from thoſe that are experienced, leſt you hereafter unprofitably ſpend your labour and coſts. As for thoſe ſtones know that very many of them are found in ſeveral places, chiefly in thoſe that are ſandy and mountainous, but in ſome more and better than in others: for there is ſeldom ſeen ſand without flints, and oft-times the ſand it ſelf, though very little doth not want Gold. But they are very likely to be found on the ſhoars of Rivers, where the waters waſhing away the ſand from the flints they are found in great abundance, though they are not ſo eaſily known by their outſide, as thoſe which were found clean in the ſand, becauſe they are covered with ſlime. Wherefore they muſt be broken with a hammer, that that may be ſeen which is in them, which may better appear if they be burnt, and quencht in cold water. For the ſtone retaining its whiteneſs when it is burnt and quencht doth contain nothing; but acquiring a redneſs it ſhews there is ſomething in it, and the more red it is the better token it is.

N. B. But this is not to be underſtood of ſandy ſtones, waxing red in ſome part, in the fire, containing no gold, but of flints out of which by a mutual percuſſion fire is brought forth, which the more pure they are the purer gold do they yield, There are alſo flints out of which fire is forced by percuſſion being red in the fire, which contain no gold but Iron; which you may know by that clear redneſs before the burning, which being burnt is changed into an obſcure redneſs, not ſhining and crude: but the flints containing Gold, being burnt do acquire a fair golden yellowneſs, or reddiſh colour, as if they were covered with gold, and that through the whole ſubſtance if they be broken in pieces. And theſe give a pure gold, but thoſe other yield a red extraction like blood, yielding not gold, but the pureſt and malleable iron, good in Chymick uſes, (but chiefly for ſilver to be cemented and exalted) for gold is ſeldome to be found in them; the which is well to be obſerved leſt thou draw out iron in ſtead of gold, and ſo loſe thy labour.

Alſo the beſt ſtones containing gold, are thoſe which are white and ſhining, here and there throughout having in the whole ſubſtance green ſpots and lines, red, yellow, skie-coloured and brown. There are alſo black flints out of which fire is forced by percuſſion, having gold and iron, which may be ſeparated with profit, yielding ſometimes plenty of ironiſh Gold, which may in like manner, be ſeparated of which afterward.

They are very good flints alſo which being burnt retain a whiteneſs, with veins green, skie-coloured, and ſuch like, neither are they diſeſteemed which burnt, have black ſpots, and not veins.

But the ſtones (*Quartzen* and *Hornſtein*) although they in burning are not altered, yet if there be ſeen before gold volatile and ſpiritual, they by ſeparation of themſelves yield gold.

Groſs and ſubtle ſand having light and yellow gold, yields in the burning a skie-coloured ſmoak, and is exalted in colour, *viz.* browniſh: but that hath nothing which is not altered.

Subtle earth, yellow or red, paſſing through ſand or a mountain like a vein contains alſo gold, which is for the moſt part volatile, and not mature, flying away in reduction, having ingreſs into ſilver and

other

other metals, and therefore for this reaſon conſervable,

For thy better knowledge thou mayſt prove the ſtones, with white fuſile glaſs, which thing is treated of in the fourth part of the Philoſophical Furnaces, that thou mayſt not have cauſe to impute the fault of thy errour to me; therefore I would have thee underſtand, *viz.* that all ſtones contain not gold, neither in all is it ſeparable by the ſpirit of ſalt: they are therefore to be known before they be applyed to the work.

Now follows the preparation of flints, and the extraction of the gold contained in them, by the ſpirit of ſalt.

Firſt the flints being made red hot in the fire, they muſt be quencht in cold water, after taken out and cooled, and finely powdered.

N. B. When they are broken in a Mortar the better parts may eaſily be ſeparated from the baſer: for while they are finely powdered, always the beſt part goes into red powder firſt, the worſer part thicker and harder, containing little or nothing, being left; And if they be courſly powdered and ſifted through a fine ſieve the more ſubtle part like red powder goes through the ſieve, the unuſeful part being left in the ſieve like white duſt, which may be caſt away: and if yet ſome redneſs appears, it muſt again be powdered in a Mortar, and the better part ſhall go into a red powder, the baſer part being left in the ſieve hard and white which is to be caſt away, but you muſt obſerve that not all and every of theſe flints are thus ſeparable by powdering; for ſome being beaten do every where retain the ſame colour, without any ſeparation of the better parts, which you muſt finely powder and extract in the whole ſubſtance, But they (*viz.* thoſe ſeparable) are more eaſily extracted, becauſe all the gold contained in one pound for the moſt part may be gathered out of three or four ounces finely powdered and ſeparated in the aforeſaid manner; ſo that it is not needful to extract the whole ſtone, nor to ſpend ſo much ſpirit of ſalt. But ſand and clay need not ſuch a preparation, but without a preparation being made before, are extracted by the affuſion of the ſpirit of ſalt.

R then of the flints as aforeſaid prepared and ſeparated two, three, four, ſix pound, to which being put into a cucurbit of glaſs whole (undivided) pour of the ſpirit of Salt to the depth of three or four fingers breadth, and place it in hot ſand or *Balneo*, that there the ſpirit of ſalt may be hot, and may extract the Gold, and ſo let it continue for five, ſix or more hours ſpace, until the ſpirit tinged with a deep redneſs, can extract no more. And perchance at the firſt time (though ſeldom) it may not be tinged with ſo great a redneſs, then muſt you decant that ſame imperfectly tinged ſpirit, and pour to other flints after the manner expreſſed, prepared in another cucurbit, and place it with the flints in a moderate heat for to extract the gold; which done pour it off again, and pour it to freſh flints, and do ſo often until it hath drawn to it a ſufficient quantity of gold; which afterward thou muſt keep, until thou haſt gotten a greater quantity, and all the Gold may be ſeparated at one time from it, as afterward ſhall be ſaid.

Which done pour to the reſerved flints in the firſt cucurbit, a freſh ſpirit of ſalt, and leave that ſo long in heat, until it be coloured, and extract the gold that is left in the flints, and was not at the firſt time extracted; which ſpirit being afterward decanted, pour it to the flints reſerved in the ſecond and third cucurbit, to extract the reſidue of the gold which was left at the firſt time; and ſo conſequently to the others reſerved, until the ſpirit be ſufficiently coloured, and can attract no more; which afterward pour off and put it to the firſt, which was reſerved. You muſt alſo pour a freſh ſpirit to the remainder of the extraction for the extracting of all the gold. At length pour to it alſo common water to waſh away the tinged ſpirit of gold remaining in the flints, that none of the Gold may be loſt.

And this labour is ſo long and often to be repeated till there remain neither flints nor ſpirits; in the mean while you ſhould caſt away the flints extracted and waſhed, that the cucurbits may be filled with freſh flints, and ſo continue the work; and if there be no more ſpirit left to continue the extraction, you may then ſeparate the extracted gold from the ſpirit, which is done as followeth: but firſt you muſt have plenty of glaſs veſſels, or retorts of the beſt earth, which may retain the ſpirits; which you may ſo far fill with the impregnated ſpirit, that the ſpirit in the abſtraction run not over, which done, it is to be extracted in a dry *Balneo* by little and little from the Gold, which ſpirit ye may uſe again in the aforeſaid work. And the Gold which is left in the bottom of the veſſels, is to be ſeparated from the veſſels with a crooked iron wier and (kept being very like to red earth) for its uſe, until thou haſt gotten a good quantity, *viz.* ſo much as ſufficeth for ſeparation and purgation (of which afterward) to be made by Antimony.

N. B. But when thou ſhalt extract red talc with ſpirit of ſalt, red or black granates, *Smiris*, or *Lapis Calaminaris*, and other Foſſiles, which beſide fixt Gold contain much immature and volatile Gold; you muſt in the abſtraction caſt in a little iron, *viz.* to the ſolution, which retains and fixes the gold which otherwiſe flyes away in fuſion. Wherefore thoſe ſolutions and extractions of Talc and other things containing volatile gold are better extracted out of iron Cucurbits by earthen alembicks than out of glaſs and earthen retorts, becauſe then that volatile gold doth attract only ſo much thence as is ſufficient for its fixation; which iron is after eaſily ſeparated by the Antimony from the gold, as ſhall after be taught. And this is to be noted, that not the whole granate is ſoluble in the ſpirit of ſalt, although it be long left in digeſtion, always retaining its former colour; wherefore there is a difference to be made, or a preparation to be learned, requiſit for the ſolution of the gold contained in them.

And you muſt extract Talc not with too much or exceſſive heat, leſt its ſubſtance be totally diſſolved in the ſpirit and be a hinderance to the work; becauſe there is little profit then, for it is therefore appointed, that a little gold diſperſed in a great quantity of Talc may be reduced into a little compaſs that it need not that all the quantity of Talc be made fuſile, becauſe it will thereby procure loſs. But there is no danger in flints, becauſe the ſpirit of ſalt doth not diſſolve them as it doth Talc, but only extracts gold from thence, the ſtony body being left. The *lapis calaminaris* may alſo otherwiſe be handled in the extraction and fixation than gra-

nates, flints and Talc, becauſe it is almoſt wholly ſoluble in the ſpirit of ſalt; which work is not here to be handled, becauſe the extraction and fixation is taught in a peculiar way in another place, neither do I mean to treat of it here, but only of the extraction of gold out of flints every where to be found. And this is the way of extraction of Gold out of flints and ſand in heat by the ſpirit of ſalt, to be done in glaſs veſſels. But there is another way too, which is done in cold without glaſs veſſels, which I thought worth the ſetting down, that in the aforeſaid work you may chooſe which you pleaſe, this or that, and it is done as followeth. We muſt have in this way ſtore of earthen funnels well burnt, and not ſucking up the ſpirits; for want of which we muſt have ſuch as be of ſtrong glaſs: there muſt alſo be a form with many holes in it to receive the aforeſaid funnels, under which muſt be placed glaſs diſhes or baſons to receive the ſtrained ſpirit.

Here follows the work to be performed by Funnels.

THe Funnels being put in the holes of the form, you muſt firſt put a big piece of *flint* in the ſtraighter part of the Funnel, to which after put leſſer pieces, and on theſe again leſs, *viz.* as much as ſerveth to fill the ſtraight part of the Funnel, of which the larger part is after to be filled with powdered flints, but ſo that there be left a depth of three or four fingers breadth for the ſpirit of ſalt. By this means thoſe greater pieces in the lower part will hinder the paſſage of the fine powder in the Affuſion of the Spirit of Salt.

Which being done as it ought, pour to the flints contained in the Funnels the ſpirit of ſalt, two or three fingers breadth in deepneſs, which forthwith ſhall work on the flints, and attract their gold, and then run into the diſh or baſon ſet underneath: and becauſe for the moſt part at the firſt time, ſome of the powder paſſeth through with the ſpirit, you muſt ſo often pour the ſame ſpirits on the flints until there be a ſtoppage, and the ſpirit come clear; afterward pour this ſpirit into the ſecond Funnel with flints; and then into the third, and ſo conſequently, until it be ſtrained through the flints of every Funnel; or till the ſpirit be ſufficiently coloured, which you muſt keep until you have gotten a ſufficient quantity to be diſtilled by retort for the ſeparating the ſpirit from the gold. Then that firſt ſpirit being ſtrained through the flints of each Funnel according to order and coloured, pour a freſh ſpirit to the flints of all the Funnels according to order, beginning at the firſt, till you come to the laſt, until that be ſufficiently coloured; which being done, pour a freſh ſpirit of ſalt to the flints (according to their order) contained in every Funnel. And when you ſee the ſtrained ſpirit not to receive a tincture, it's a ſign that all the gold is extracted; and then pour on no more ſpirit but common water, that it may be ſtrained, and the water will attract the ſpirit of ſalt left in the flints, that none ſhall be loſt, which acidiſh water ſave by its ſelf to the ſame, and the like uſes: which being done, take out the extracted flints, and fill the Funnels with freſh as before, *viz.* to be extracted; and do this ſo long as you have flints and ſpirit. But you muſt not pour a ſpirit not ſufficiently tinged into the ſpirits that are well coloured and impregnated with gold, but keep it a part, and pour it ſtill to freſh prepared flints, according to order, contained in divers Funnels, *viz.* until it be ſufficiently coloured; and being coloured, ſeparate it by the glaſs retorts with the reſt, extracting it from the gold by abſtraction; and being abſtracted again, uſe it to a new work like the former. And by this means with 100 pound of ſpirit of ſalt may be extracted ſome thouſand pounds of flints prepared, and ſeparate the gold contained in them, which otherwiſe by fuſion cannot be done. But the chief point conſiſteth in the extraction (the ſpirit of ſalt being well and rightly firſt adminiſtred) *viz.* that the ſpirit may not be waſted, whereby many ſtones may be abſtracted with a little ſpirit. But this caution is to be obſerved in this extraction, which is done in cold, that it requireth a ſtronger ſpirit of ſalt than that, which is done in heat by cucurbits, or elſe the buſines goes on ſlower: but with a ſtronger ſpirit by this (the cold) way they are extracted ſooner and eaſier than by that which is done in heat; and neither ſo dangerous, laborious or coſtly: this extraction then, *viz.* the cold, requires a ſtronger ſpirit of ſalt (which is worth noting) than the hot.

And this is that way, by which thoſe golden flints, and other golden foſſiles are prepared, and with the ſpirit of ſalt are extracted, and by which it is again ſeparated from them: Now ſhall follow the manner of purification, *viz.* of the Gold left in the Retort.

N. B. The pure gold being extracted out of the flints, not the iron-like, there needs no great buſineſs of purification; for thou mayſt purify it by fuſion with borax, or with the fluxing powder made with the equal weight of nitre and tartar: but if the gold extracted out of Flints be mixt with iron, as for the moſt part it is, then you muſt not fuſe it with Fluxing Powder, becauſe it is not thereby purified or rendered malleable Gold, but ſeparate it by lead, by which way it is purged and made malleable. And if ſuch Gold have any ſulphureous impurity mixt beſides, it is not to be ſeparated with lead, becauſe it is then partly turned to droſs and other impurities by the iron with loſs; wherefore it is to be purged with three parts of Antimony and ſeparated; by which means nothing is loſt; which is the beſt way of ſeparation and purification of Gold, *viz.* the ferreous, without which it cannot otherwiſe be ſeparated without loſs.

How impure Gold may be ſeparated and purged by Antimony.

THis work is neceſſary to be known, if you think to have any benefit by the aforeſaid extraction of Flints by the ſpirit of Salt, which without this ſeparation and reduction is of no moment: and what profit I pray is there by the extraction of immature Gold, which by the common way cannot be purg'd, requiring the induſtry of the Artiſt in fuſion, whereby it may be ſeparated from its ſulphureous fæces and fixed? For it is eaſie to conjecture, that ſuch ſpiritual and volatile gold mixed with Iron, by that common flux is not reducible into a body, but rather into droſs: for experience teſtifies that gold diſſolved with the ſpirit of ſalt, end alſo iron, or any other ſulphureous thing, the ſpirit of ſalt being abſtracted cannot be reduced whole by the vulgar flux made of Nitre and Tartar,

going

going into droſs: which if it happen to corporeal, pure and fixt gold, how ſhall it be otherwiſe with that which is incorporeal, unclean and volatile? for the Gold being ironiſh commonly, which is extracted out of ſtones, and iron having great affinity with gold (by reaſon of which being nearly united, it is difficultly ſeparated, ſo that it eaſier goes with iron into droſs than parted from it) you muſt of neceſſi ty make a flux not only attracting that impure gold, but alſo purifying and cleanſing it, that which Antimony alone doth, which with its combuſtible fuſible Sulphur eaſily enters that ironiſh Gold: But by its Mercury it attracteth the pure corporeal gold, and cleanſeth it, and ſeparates it from all droſs without any loſs: wherefore there cannot be a better flux, but requiring induſtry, or an ingenious ſeparation of the Antimony from the gold, without waſting the gold; which is done as follows.

And firſt your ferreous gold, that is left in the abſtraction of the ſpirit of ſalt, muſt be finely powdered in iron retorts or pots, and mingled with it two or three parts of Antimony powdered, and mixt in a very ſtrong crucible filled and covered, and then fuſed in our fourth furnace, until that flow like water; which ſoon appearing, pour them together into a heated Cone, ſmeared within with wax, and when they be cold, ſeparate from the droſs the *Regulus* (having moſt of the gold) with a hammer, and keep it by it ſelf. Which done, you muſt again melt the droſſy Antimony (as yet containing much gold) that was left, in the crucible, and add to it a little filing of Iron, mixing them with a crooked wier, and that Antimonial combuſtible ſulphur will be mortified by adding iron, and will yield a *Regulus* containing the reſt of the gold, which, as a regard is had to the quantity of iron added, will be more or leſs, and for the moſt part will anſwer in weight to the weight of the iron; then caſt the maſs (well flowing) into a Cone heated and ſmeared on the inſide with wax, which being cold, ſeparate again the *Regulus* from the droſs with a hammer, which alſo is to be kept by it ſelf; melt the droſs again, as before, and precipitate it with iron, and extract the *Regulus* thence, which keep by its ſelf, for it contains gold and ſilver mixt. For the beſt gold is precipitated the firſt time, but afterward the baſer ſort, and at laſt only Silver. Wherefore every *Regulus* is to be kept by it ſelf, that the pureſt gold may be a part, and the ſilvered gold by it ſelf.

N. B. And if the Antimony, by the addition of Iron, do loſe its fuſibility, and therefore can yield no *Regulus*, it's required, that you at every time when precipitation is made, by adding iron, that you do alſo caſt in ſome *Miſy*, to make the maſs to melt in the crucible and precipitate the *Regulus*. All the gold and ſilver being reduced into three or four *Regulus*'s, you muſt keep the droſſy parts by themſelves that were left, of which we ſhall ſpeak hereafter.

Now follows the way of ſeparating the Gold and Silver from the Antimony.

THE aforeſaid antimonial *Regulus*'s may many waies be purged, and firſt by help of Bellows on a plain earthen teſt, as the cuſtom is with Goldſmiths when they make Gold fuſile by Antimony, which labour is tedious and dangerous; which cannot be done often without the loſs of health, nor in great quantity: wherefore when a better way is known, 'tis a folly to do it ſo. The *Regulus*'s alſo may be purified by lead on a teſte, which work may be done in a great quantity, but it requires abundance of coals and lead, where the Antimony cannot be preſerved: but it may be done with gain, and is to be preferred before the former waies: Thou maiſt if thou pleaſeſt calcine the aforeſaid *Regulus*'s to aſhes, and then fuſe them; which way the gold and ſilver may eaſily be drawn out. Thou maiſt alſo fuſe them in a crucible, and by the addition of ſome ſalts, ſeparate the antimony from the gold and ſilver, turning the antimony into droſs, which being ſeparated, thoſe are found purified and malleable, which though it be the eaſieſt way, it is yet alſo very dangerous, for the ſalts often, if you do not warily proceed, do ſpoyl much gold and ſilver, and ſometimes leave gold immalleable, and ſo double the pains.

But he who knows how to do this by Nitre only, he may with great gain, and in a ſhort time, purifie a great quantity of the aforeſaid *Regulus*'s without loſs of the gold, ſilver, or antimony. There are alſo other means for the doing of it which to relate were tedious and indeed impoſſible. Wherefore I will ſet down the beſt of all, moſt profitable in the ſeparations of great quantities of *Regulus*'s. Where firſt is required ſome peculiar little Furnace with a Fire almoſt like to that in our firſt part of Philoſophical Furnaces, built for the ſubliming of Flowers; it wants indeed a grate, but it hath little vents for to make the coals burn, that thy antimony ſeparated from the gold, may be ſublimated or elevated into ſublimatory veſſels. Which being rightly built and heated, let ſo much of the *Regulus* be caſt in with a ſpoon as the Fire can bear, which will quickly melt and be elevated, the air being attracted by the vents, without any trouble: which being ſublimed, you may caſt in more, if you have more, until all the *Regulus* be ſeparated and ſublimated from the gold and ſilver, which are left in the Fire pure and malleable; the furnace being cold, you may take out the Flowers and keep them (of which afterwards) for uſes, which way you may not only ſeparate a great number of *Regulus*'s from gold and ſilver in a ſmall time, but alſo keep all the antimony, which may many waies be uſed in Alchymy and Medicine with great profit. Which ſure is an excellent knowledge, for not only hereby may any one get abundantly, without wronging his neighbour, but alſo help many ſick People, *viz.* by that excellent Medicine made of the Flowers: which is a ſpecial gift of God, for which we owe immortal Thanks. And this is, of all others that I know, the beſt way of ſeparation of gold from antimony, which is not only done in great quantity, in a ſhort time, and with ſmall charge, but alſo without loſs of the Antimony.

Here follows the Uſe of the Antimonial Flowers.

FIrſt, you may take the whiteſt of the Flowers out of the lower hole, and keep them for a Univerſal Medicine; but reduce the reſt (being leſs pure) into *Regulus* by the ſalt of Tartar, for divers uſes, as ſhall be ſaid afterward; or you may mingle them with an equal weight of common ſulphur, or antimony, which being mixt in a covered crucible, melt them, and they will yield an antimony like to a natural,

tural, good to purifie gold: or thou maiſt mingle them with other metals or minerals, that by this means they may be made better. Or thou maiſt uſe them in Chyrurgery, for they of all ſtiptick plaiſters make the beſt. In brief, the aforeſaid Flowers may many waies be uſed with good gain and ſucceſs.

The aforeſaid antimonial droſs may alſo be reduced into Flowers, and uſed in the ſame manner; which indeed are endowed with as excellent Properties, as they which are made out of *Regulus*'s; becauſe in that fuſion and ſeparation of gold extracted out of Flints and Talc, the gold only that was fixt and mature, was ſeparated from the *Regulus*'s, (the immature and volatile being left in the droſs) and elevated with the Flowers: It follows thence, that theſe are better, as well in medicine as in the tranſmutation of metals.

Or, if thou wilt, add to the antimony (as aforeſaid uſed) old iron, to reduce it in a furnace, and take the *Regulus*, having gold and ſilver, which may therefore be uſed in other operations of Chymiſtry, where there is need of *Regulus*, as we may ſhew hereafter. But the droſs doth yield a *Regulus*, *viz.* in a very ſtrong Fire, and a Furnace with a peculiar ſeparatory by abſtraction, which although it contain not gold, yet it may be uſed not without gain, as if it be mingled with Tin in fuſion, it procures to it a hardneſs and ſound, uſeful for faſhioning divers ſort of Houſhold-ſtuff, which is not ſo eaſily darkened as the common Tin, or if thou wilt not, thou maiſt make weights of it.

Hitherto we have treated of the extraction of gold out of Flints, and of its putrification by antimony; now we will teach you how to uſe the reſt of the antimony, as well in the perfection of baſe metals as in medicine, as well for the preſerving of Health, as the curing of Diſeaſes.

But ſeeing we have made mention of an Univerſal Medicine, to be made out of antimony aforeſaid, I would not have thee think that that is ſuch as can take away all diſtempers in general, without diſtinction, which vertue is only aſcribed to the Philoſophers Stone, but not by me to this medicine; to which I attribute no more than I have tryed: But this in truth I dare affirm, that there is, beſides the ſtone, ſcarce any comparable to it; for it doth not only preſerve the body from divers Diſeaſes, but alſo happily frees it from the preſent, ſo that it may deſervedly be termed a *Univerſal Medicine.*

The Preparation followeth.

℞ of the flowers purified from the droſs a pound, *viz.* of Antimony, by which the extracted gold was purified, which for the moſt part are of a yellow colour, having gold volatile and immature: in defect of which, take the flowers made out of the golden *Regulus*'s, being for the moſt part white, to which pour in a Glaſs Vial, ſtrong and long-necked, of ſpirit of wine tartariſed, three or four pound, mingle and ſtir them well together, and put on it another crooked pipe (within which let there be ſome ounces of Quickſilver, as is deſcribed in the Fifth Part of our Philoſophical Furnaces) and make ſtrong the joynts with a bullocks bladder thrice folded, made wet; which dryed, place the glaſs in *Balneum*, and give fire by degrees, that the ſpirit of wine with the antimony may digeſt, in which leave it for 24 hours ſpace, and ſo ſoon as the fire is out, take out the glaſs, when it is cold, pour off the ſpirit tinged red from the Flowers, and pour on freſh; and place it, as before, in *Balneum*, to digeſt 24 hours ſpace, till it be red, and do this the third time, or ſo often till the Spirit be no more coloured, for then no more is to be poured on, and that which is coloured, is to be filtred with Cap paper. The reſt of the Flowers, after the extraction, as not requiſite to this buſineſs, are to be either kept by themſelves, or thrown away. But the tinged Spirit is to be abſtracted out of a glaſs cucurbit by an alembick, to the half, from the tincture, which diſtilled ſpirit may again be uſed in the ſame work: but the tincture left in the cucurbit is the medicine, of which mention has been made.

Now mention being made alſo of tartariſed ſpirit of wine, that I may ſatisfie the doubtful concerning that I will here alſo give its deſcription, which is as followeth.

R. of Tartar 20 or 30 pound, put it in a large coated retort, and place it in ſand, and diſtil the ſpirit off with a ſoft heat.

N. B. This work may better and ſooner be performed by that inſtrument of our ſecond Furnace; and becauſe it requires great and large receivers, as being very penetrative, thou maiſt firſt apply a tin or copper Serpent to the neck of the retort, inſtead of a receiver, which is placed in a tub filled with cold water, that the ſpirits being thereby cooled, may be retained, which afterward you muſt abſtract to the half, out of a glaſs cucurbit by an alembick: for the other half with the black oyl is unprofitable in this work, and therefore to be taken away. After that, mingle the more ſubtile part, diſtilled with half of the *Caput Mortuum*, of the aforeſaid Spirit, calcined to a whiteneſs, and abſtract it half again in a gentle *Balneum*, out of a glaſs cucurbit by an alembick, the joynts whereof are every where to be well cloſed, and the calcined Tartar ſhall receive with it ſelf the ſtench, together with the Phlegm, only the purer part of the Spirit, and more ſubtile diſtilling forth, which is again to be mingled with the other half of the Tartar calcined to a whiteneſs, and to be rectified by another alembick; the *Caput Mortuum* may again be calcined to take away the fetidneſs, that it may be uſed again. And this is that tartariſed ſpirit of wine, with which the aforeſaid tincture and eſſence is extracted, and truly not only this, but of all other metals, which no other can do. And if it were lawful, I would write ſomething more of its wonderful force and vertue which it hath in purifying baſer metals, with which it hath a great affinity; for it can ſeparate the pure from the impure, of which more in another place. But when it is to be uſed in mending of metals, it needs not ſo much rectification as is required in the extracting of metallick medicines; where you may draw it in plenty out of the dry lees of wine. But there is alſo another tartariſed ſpirit of wine, which may alſo be uſed in this ſame work, which is made after the followiug way: Diſſolve in a pound of the ſpirit of wine ſix ounces of Cryſtal of Tartar; which ſolution uſe in the aforeſaid extraction, in the ſame manner.

Of

Of the Vertues of this Medicine.

THis Antimonial Tincture doth, above all other Medicines evacuate vitious humours, and insensibly purgeth impure blood; opens any obstructions of the Liver, Spleen, Reins, and the other vessels, attracting to it all malignities, and leaving no impurities behind it. And becauſe it cleanseth the blood, it cures the Leprosy, French-pox, and itch, and other Diseases proceeding from the impurity of the blood. By its penetrative and attenuative vertue, it resolves all tartareous humours, and evacuateth them, *viz.* which ingender the Gout, the stone of the Bladder and Reins; but not the Stone perfectly coagulated, only it mitigateth its pain, and hinders its encreaſe; but being not hardened or coagulated, it attracteth and evacuateth it totally and fundamentally out of all parts; it takes away also all Feavers, and other diseases coming from the superfluity of humours. It gently evacuateth the water between the skin, by siege and urine. In brief, it strengthens and purges the principal parts, and preserves them from all preternatural accidents. It is a most excellent preservative in the time of pestilence, and other contagious diseases; and of them being caught, it is a most absolute remedy, expelling the disease suddenly from the heart, and evacuating it. In few words, 'tis of all others a most excellent Universal Medicine, very profitable to both old and young, and also very safe; but warily to be ministred, by reason of its strength with which it is endued, which is most powerful, for it is as a great fire, which extinguisheth the lesser. Truly a better medicine cannot be desired than this, which is extracted of a very mean thing, in a short space of time, and with very small cost and pains. I ingenuously confess, I never saw its like, which I doubt not to be the best in the World. Wherefore then do we seek any other but this, *viz.* which excels in those things which are desired from the real medicine? But as it is most excellent, yet I am certain, that many deluded people will be offended at it, being prepared out of Antimony, a mean and despised thing, and after a plain way. But 'tis no matter, *For the world will be deceived*, looking after gay things, disrespecting and despising mean things, when all good things, yea, even when God himself doth rejoice in simplicity, for which, by wicked and proud men he is not sought unto. But this is the effect of sin, by which man is so blinded, that though he know not good, when set before his eyes, yet he is studious of evil.

Of the Use and Dose of this Medicine.

SEeing of all medicines it is the most powerful, it had need be warily used, for a smaller dose is alwaies safer than a greater; which therefore may after be given; the which is to be observed in all diseases of young and old. To children of 2, 3, 4, or 6 months old, against the Worms, Scabs, Feavers, and Epilepsie, you need not give above half a drop with a proper vehicle, which you may repeat three or four times a day: it killeth the Worms; it emptyeth the stomach of evil humours: it refresheth them, and preserves them from scabbiness; and because it evacuateth evil and corrupt humours, it preserveth them from the small pox and measles, *viz.* if it be used every month; but to children of 1, 2, or 3 years old, you may give a drop, and to children of 4 or 5 years old a drop and a half: to young people between 15 and 24 years, may be given 2, 3, or 4 drops. To stronger bodies from 25 to 50 years, 4, 5, 6, or 7 drops. But the dose must be greater or less, with a regard had to the sickness of the patient. And in the Stone and Gout, may be daily administred in wine or beer, *viz.* in the morning fasting, unless the patient be very weak; for then you may give it twice or thrice in a day, and continue this till the cure be perfected; where is to be observed that he must keep a temperate dyet.

In the Leprosy, French-Pox and Scurvy, every morning may a dose be given, and the disease shall totally be rooted out. Otherwise, *viz.* the strength being too much wasted and weakned, you may give only every other day, *viz.* so long as shall be need.

In the Epilepsie it may be given daily; and also in the Dropsy. In all Feavers, two or three hours before the fit. In the Plague it is to be given presently, and every day to be repeated: but for a preservative to be drunk every week once. In all other internal affects it must be given daily, until the declining of the disease; but afterward by little and little, the medicine is to be used till the disease be fully cured.

In external, as in fresh wounds by a blow, thrust or shot, broken bones, *&c.* every day once; with a necessary extrinsical application of a Plaister. In old Fistulaes and Cancers, it may be used once every day intrinsically and extrinsically, the place affected may be cleansed with Mineral Oyntments. For by this means every inveterate evil, how desperate soever, is throughly cured, and pleasantly, without all pain.

But although this be most precious of all medicines, yet there is a *menstruum* not corrosive, with which not only more easily than with the spirit of wine tartarised, a Universal Medicine may be extracted out of Antimony, and endued with better than the aforesaid vertues; so that for the charge of one royal, in three days time, so much may be gotten as may serve to cure some thousands of men, but also all vegetables, animals, and minerals and metals, are radically dissolved and reduced into their first matter: by which means not only very great Poysons are changed into most wholesome medicines, but also bitter things are deprived of their bitterness: for by it things are so corrected, that they do no more provoke stool and vomit, *viz.* which are very vehement Cathartick (by nature) being changed into most excellent restoratives. Also fetid things being corrected by it, do acquire a sweet odour. And it doth not only (which seems a wonder) dissolve vegetables, animals and minerals with those things which come of them, but also the very Glasses; wherefore you must alwaies chuse the strongest glasses for digestion and solution, or in the defect of such, the weaker are to be changed every 6 houres. And yet it is not at all altered by those things that it doth reduce and turn into their first matter medicinal, neither in vertue nor colour; for it alwaies keeps the middle place between pure and impure, of which this falls to the bottom, but that swims on the top of the *menstruum*, which may again be used. In brief, it's vertues in preparing medicines cannot be enough praised. But it may be compared with the Mercurial water of *Basilius*

Valentinus; and the *Alcaheſt* of *Paracelſus* and *Helmont*, which I judge to be the *Fire* of the *Maccabees* turned into a thick water under-ground. It is a perpetual fire, but not alwaies burning viſibly; it is a water permanent, not wetting the hands, the Sope of the Wiſe, the Philoſophers *Azoth*, and the Royal-Bath.

Which Menſtrue though I have known ſome years, and have often uſed it with metallicks, and by it have found out many ſecrets, yet I never thought of its uſe in Phyſick, until being askt of one who was a great Student of *Helmont*, whether I knew the preparation of the liquor *Alcahaſt* of *Paracelſus*; and naming ſome of the vertues of this liquor in preparing Medicines, I began to bethink my ſelf, and I obſerved that it was my *ſecret Balneum*, that purifies minerals. Wherefore I preſently made tryal with vegetables and animals (for I knew the Vertues thereof in metallicks) and I found wonderful and aſtoniſhing things in it, which before were incredible to me. I affirm and confeſs therefore ſincerely, that all and every the invented medicines publiſhed by others and my ſelf, how rare and coſtly ſoever, are moſt mean things in my eſtimation. For this *Univerſal Key* was wanting to us. For our vegetables and minerals, however by art macerated, cannot be perfectly reſolved, and therefore we hitherto have had but part of their vertues. But now we need not much art, labour and coſt, to reduce a whole body without corroſives, into the firſt matter, like in ſhape to ſome clear and excellent water, of its own accord caſting forth its ſuperfluous terreſtreity, and becoming a moſt wholeſome medicine, conſiſting of the three pureſt principles; the which cannot be done without this *menſtruum*. For, What elſe could Phyſicians extract out of herbs than Syrups, Electuaries, Conſerves and Waters? With which Preparations they were not amended, but only qualified with the addition of Sugar or Honey, becauſe there is no ſeparation made of the pure from the impure, or good from bad. For all are left mixt together in the Electuaries and Conſerves, but in the Syrups and Waters diſtilled there is only ſome part. Extracts indeed by the ſpirit of Wine are not to be diſeſteemed, if rightly prepared, but they are no better than their ſimples; and beſides, want that which the ſpirit of wine cannot draw out, which remainder, though being calcined for the drawing out the ſalt, which is mingled with the extract, yet that is not of much moment, for fire deſtroyeth the vertue of herbs, ſo that fixed ſalts, as cryſtalliſed, do perform nothing in medicine, thoſe excepted which without combuſtion are made out of the juice of herbs, of which in the third part of our Furnaces Philoſophical. But none dares extract the moſt ſtrong or efficacious ſort of herbs for medicine, becauſe they in preparation are not corrected or amended.

But by this means the moſt ſtrong Herbs, which without this Preparation are poyſons, are matured and purified by the liquor *Alcaheſt*, ſo that they may ſafely be taken againſt moſt grievous Diſeaſes. For God did not create theſe herbs in vain, as ſome think, which he purpoſely created that his wonderful works might appear, and that it is poſſible to take away the Curſe from them by a man, being freed from the malediction by the regeneration through Chriſt. See *Opium*, Mandrake, Henbane, Hemlock, and other ſtupifying things, how deadly they are, being cautiouſly uſed; which corrected by this Menſtrue, become moſt ſafe and excellent medicines. How dangerous is ſpurge, ſcamony, hellebor, gambugium, and other ſtrong purgers (being adminiſtred unwarily) no man is ignorant: all which are by this way corrected, and changed into moſt wholeſome medicaments. Who, I pray, dares eat Wolfsbane, and poyſonous Toad-ſtools, and other venomous vegetables? which are all ſo corrected by the liquor *Alcaheſt*, as that not only they are not poyſonous, but are alſo turned into moſt ſafe and wholſome medicines of many diſeaſes, *Nux vomica*, Levant-berries, and other things that diſturb the Brain, are by this means made wholſome; alſo poyſonous Animals, as Spiders, Toads, Serpents, Vipers, *&c.* are by it corrected, as that not only they are not poyſonous, but do reſiſt and expel poyſon.

N. B. Conſider the Spiders ſigned with the croſs, who change their skin every month, and renew themſelves, which the ſerpents and halcion do but once a year. How great the vertue of worms, earthy and crude, *&c.* is in reſolving tartarous humours, and the French Diſeaſe, many know; What then will they do, being corrected with this Menſtrue? The *Cantharides* and *Millipedes* are alſo ſo corrected, that they may more ſafely be uſed in provoking Urine. And if that moſt venomous Baſilisk, of which there are ſo many fables, whoſe ſight only kills men (which according to the letter is falſe) could be had, he might be changed into medicine by the liquor *Alcaheſt*; as that mineral Baſilisk, Gun-powder may be, which in a moment kills innumerable men; alſo Arſenick, Orpiment, Kobolt, and the like; ſo that they be deprived of their malignity, and be reduced into very excellent medicines. In brief, its excellent vertues which it manifeſts in correcting of venomous ſimples cannot be ſufficiently deſcribed. Wherefore it's worth our pains to ſearch it with all our power, that we may prepare admirable medicines, that the ſick may not for the future be ſo vexed with thoſe tedious and bitter cups. Truly I cannot enough admire its great vertues, which have been hid ſo long. It is not a corroſive thing, and yet diſſolves every thing, but ſome things ſooner than others. It changeth and amendeth their natural vertues; wherefore it may be the comfort of Spagyriſts, having a long time ſought for rare medicines, *viz.* being that by which vegetables are ſeparated and corrected, and alſo animals and minerals. Wherefore all conſcientious Phyſicians may have commended to them the Preparation of this univerſal Menſtrue, by the help whereof to prepare their medicines; of which the original and preparation is vile, but its vertues moſt efficacious, the finding out and uſes abſtruſe. Wherefore it is not obtained, but from God, *from whom proceeds every good gift*. Do not think then that gluttony and drunkenneſs, idleneſs, pride, and lying, the contempt of thy neighbour, malice, avarice, with an impious life, to be the means by which it is to to be obtained, for it is only *the gift of the merciful God*, *viz.* this Menſtrue, the gate and key of which is only Divine mercy. But that thou maiſt know what is to be determined concerning medicines prepared out of poyſonous ſimples, I will in brief expound that by example; for all vegetables, animals, and minerals, called poyſons, making war with humane nature being intrinſically uſed, and therefore not undeſervedly ſhunn'd of all, are like ſome powerful unvanquiſhable enemy, with all his power ſeeking the oppreſſion and deſtruction of his contrary, who being checked by a mediator of no leſs ſtrength, and recon-

reconciled with his contrary, does no more (being unable before the reconciliation to reſiſt his powerful enemies) fear the contrariety of his enemy, which now is made his friend, bringing aid for the exſtirpating and vanquiſhing of all ſuch-like (otherwiſe) invincible enemies. Even ſo is it with venomous vegetables, animals, and minerals, deſtructive to humane nature: which by the liquor *Alkaheſt* (a checker and reconciler) are ſo corrected and reduced, that they hurt not, being deprived of their malignity and made friends with men: whereby they are not longer poyſonous enemies, but very ſafe and wholſome remedies, agreeing to humane nature, overcoming and expelling other the like enemies otherwiſe poyſonous and invincible, for by how much the more enemy before reconciliation it was, by ſo much the more help is brought by it, the reconciliation being made. There is not the like found in nature, which can ſo ſuddenly correct Poyſons, and reduce them into their firſt matter, and bring them into very wholſome eſſences. Let religious Phyſicians then that can, get this. And ſo I end this declaration (not without cauſe ſet down) which will move thoſe hearts which are not as yet hardened. This certainly is a true Philoſophical correction, with which that which is malign is turned into a wholſome ſubſtance. What profits that correction, I pray, which is made by the admixtion of other things, as in the mixture of Catharticks and Cordials? Truly nothing, neither can the Cordials do any thing but debilitate the Catharticks; for nature is not at once able to expel a purging poyſon, and attract a thing confortative and corroborative: For a Purge being given, forthwith that ſhews its ſtrength in the body, whoſe malignity nature reſiſting, deſireth to expel it, before that it can attract the confortative; wherefore that friend is expelled, together with the diſeaſe. The ſame happens in the mixture of ſugar, honey, and other ſweet things with bitter, ſharp, and tart, *&c.* whoſe unpleaſantneſs is not corrected by ſweet things, but only dulled, thereby acquiring another ſmell and taſte, without any other eſſential alteration. Which correction is like to that which is made in Taverns, amending the air with ſweet fumes, which before was infected with the ſpittings, ſpewings, and ſtinks of ruſtick drunkards, which is to ruſticks an excellent correction, attracting the ill as well as the good aromatick odour, being by drunkenneſs deprived of their judgment, but not ſo to ſober men enjoying the uſe of Underſtanding, to whom that ſeems a ruſtick correction. In this manner (not to be commended) are at this day ſimples corrected. But a true and Philoſophical correction is done by it ſelf, without the addition of other things, by benefit of the fire only, as well actual as potentially moiſt, by ripening, mending, and ſeparating the malignity; which is done by the liquor *Alcaheſt*, as it is called by *Paracelſus* and *Helmont*.

But whether this my liquor be the ſame *Alcaheſt* of *Paracelſus* and *Helmont*, it matters not if it perform the ſame things.

Fire, and a fiery vertue may do much, but not by burning and deſtroying, but by maturation and nutrition; and feeding and moiſtening. Of which moiſt Fire, ſee *Artephius*, *Bernhardus*, *Baſilius*, *Paracelſus*, &c. for maturation is not done with cold things, but hot, promoting germination. And what ever Nature hath left imperfect in the vegetable, mineral, and animal kingdom, *viz.* accidentally; that may be amended by Art with the liquor *Alkaheſt*, which is the beſt way of correction, until by benefit of art, and the help of nature, ſome better thing be found out, *&c.*

And theſe are the vertues of that wonderful liquor *Alkaheſt*, which is made uſe of in the preparation of medicines: And, becauſe it is ſaid before that it ſhews its vertues on metallicks alſo, I could not conceal them from the ſtudious. But all its vertues ſhall not here be related, for it is endued with ſo many, that no mortal is able to number them. As for me, although by divine favour and the inſtruction of that excellent man *Paracelſus* (excellently in a certain place, but obſerved but by few; deſcribing it, ſpeaking of it briefly, but very plainly and clearly naming it) I did obtain the knowledge thereof, which afterward daily I did more and more encreaſe, ſo that I could hardly believe that any ever had ſpent ſo much money and pains in the ſearching of its vertues, for the trying of metals: yet I muſt needs confeſs, although happily I have made more tryal therein than any other; that many of its vertues are as yet unknown to me. Seeing then that its vertues and ſtrength cannot all be tryed by any man, by reaſon of his ſhort life, although ſearching an hundred years; and that by our merciful Father only to a few, and but part of the knowledge of its wonderful and incredible force, is granted, to the glory of His Divine Name, in favour of the poor ſick, which none, how learned ſoever, with his ambitious learning and craft could ever obtain. Therefore ſome excellent gifts being given from the Father of lights, the Omnipotent GOD, to ſome of His Children, *gratis*, and out of meer mercy, *viz.* for ſome cauſes, I eaſily believe, that it is not His Will that it ſhall long be kept cloſe, but be revealed to the world, to the glory of His Name, and the benefit of our poor neighbour. Wherefore I could not longer hold my peace, hiding my talent which I received *gratis*, though ſmall, but communicate it *gratis* to my neighbour; but ſo that the Divine myſtery may not be gotten by thoſe ungodly abuſers, but only by the worthy through divine favour. I affirm therefore expreſly, that in whole nature ſuch a thing may not be found; for not only by its help all animals, vegetables and minerals may be reduced into very excellent and ſafe medicines, but alſo be brought into the firſt matter; minerals and metals may be purified, waſhed and fixed, and ſo changed into better bodies. That which is worthy admiration, that in ſo vile and mean a ſubject ſhould lye hid ſo great vertues, by which alone without any other art, may be acquired riches and honours, and loſt health. Than which thing, what doth mortal man more need in his miſery, beſides the Divine Word, the comfort of the ſoul, than for neceſſary ſuſtentation of life, ſoundneſs of body, and honeſt report before God and men? All theſe things may be had with this ſubject, ſo that one need not to involve himſelf into any other troubleſome art or vanity of this world, having this ſecret, whereby all neceſſaries may in abundance be procured: of which gift that this unclean world is unworthy, I do affirm ſincerely, becauſe it ſwells with ambition and avarice; for which we are not able to give God the Donor ſufficient thanks in our whole life, wherefore I would have all what ſtate or order ſoever earneſtly admoniſhed, that they do not uſe this gift from Heaven to the deſtruction of their ſouls, but in thankfulneſs to Him that gave it, and every way to the good of their Chriſtian Neighbour.

Now follow the Vertues which it manifeſteth in Metallicks.

FIrſt, it (*viz.*) the Philoſophical Menſtrue, doth radically diſſolve all minerals and metals without noiſe, and reduces them into very ſafe and wholſome medicines. Out of gold it makes potable gold; out of ſilver potable ſilver, and ſo conſequently of other potable metals; ſo that it may well be called *The Univerſal Mercury.*

Secondly, This ſecret Menſtrue purgeth, waſheth, and tranſmuteth minerals and metals to a more noble ſpecies; wherefore it may well be called *Sapo Sapientum*, by which the ſaying of the Philoſophers is confirmed; *Ignis & Azoth abluunt Latonem.*

Thirdly, By it all minerals and metals are matured and fixed, ſo as that afterward the immature gold or ſilver incorporated with them, may by cupellation be drawn out with gain; wherefore 'tis deſervedly compared to *Hermes* ſeal.

Fourthly, It makes metals volatile, and radically conjoyns them that they abide together, and one act on the other in the fire; it deſtroys and revives, kills and renews; wherefore it is compared to the Phenix.

Fifthly, It ſeparates metals without any loſs, and that ſpeedily; but after another manner than corroſives, ſo that each of them may be had by themſelves. For Example: Being about to ſeparate gold, ſilver, copper, iron, tin, lead mixt; one, or two, three, or four of them mixt, that they may appear each by themſelves, without the loſs of any, you need not cupellate the mixture with lead, which way only gold and ſilver are gotten out, with the loſs of all the reſt: but by this way they are all preſerved, where by turns, one after another, they are extracted wonderfully and ſwiftly, in half an hours time, by this ſharp *Vinegar of the Philoſophers*, &c.

Sixthly, By it metals may ſuddenly be mortified and reduced into tranſparent glaſs, irreducible, and like *Amauſa*, but reſerving the propriety and nature of every metal: which in the reduction of Gold do give perfect ſilver; whereby is confirmed that ſaying of the Philoſophers, *The corruption of one thing is the generation of another*; and that of *Paracelſus*, *Ex aliquo fiat nihilum, & ex nihilo aliquid.* But this incombuſtible water, or permanent water, ſhews the truth of the Philoſophers writings, generally mentioning it. In it the ſolution, putrefaction, diſtillation, ſublimation, circulation, aſcenſion, deſcenſion, cohobation, inceration, calcination, coagulation, fixation and fermentation; *&c.* in their work to be done at one time and one way: In which only operation all the colours appear of which the Philoſophers make mention; as the head of the crow, virgins milk, dragons blood, peacocks tayls, green and red lyon, *&c.* There is alſo by it demonſtrated the truth (by the liquor *Alkaheſt*) of that Hermetical ſaying, *That which is above, is as that which is beneath*, &c. and many other things are performed by its help, as making that ſecret Sandivogian *Chalybs*; alſo that long ſought-for oyl of Talc.

So far (courteous Reader) hath come my Experience; neither doubt I, but by it to obtain that univerſal *Salamander* which lives in the fire.

Theſe things which I write are true, and no fallacies. And though this ſecret be incredible to the ignorant, for the wonderful vertues it ſheweth in the preparation of medicines, I would willingly publiſh it to the World for publick good, but on conſideration I held it not meet to communicate it for certain cauſes. But only leſt the knowledge of it ſhould periſh, and that the true (and almoſt extinct) medicine for the curing of diſeaſes vulgarly incurable, might flouriſh, I have revealed this ſecret *menſtruum* to two friends, *viz.* its preparation and uſe. [See the preparation in *Mirac. Mundi*, and *Apology againſt Farner.*]

But do thou not think, becauſe I write of theſe high things, that I do intend to make common the Secret to all in general; not ſo, but I endeavour to confirm him that ſeeketh, and give him occaſion to ſearch this ſecret deeper; which being found, he ſhall not only find the truth of my words, but he ſhall daily by exerciſe obtain far greater things than theſe.

And becauſe I have never aſpired after vain riches and honours, nor never deſire them; I might well be perſwaded to leave to others, as yet not hating the wicked World, my troubleſome labours, becauſe in this my painful age ſuch tedious labours are very burdenſome; beſides Philoſophy hath pointed me another way, ſo that what I am able I have determined to abſtain from theſe vanities, and to ſeek a perpetual good, the life of reſt; but my counſel ſhall not be wanting to thoſe that ſeek it: for beſides moved with the former reaſons, alſo ſeeing innumerable many vain Philoſophers, as well learned as unlearned, unceſſantly working, and loſing their time and labour, and at laſt deſpairing, are perſwaded that there is no truth in the Philoſophers writings, but to be all filled with lyes and deceits; whence royal Chymiſtry is diſgraced.

But this *menſtruum* ſufficeth to defend the writings of the Philoſophers, without the metallick tranſmutations; ſo that I verily believe the time to be near, when the Omnipotent G O D, before He judge the World by fire, will ſhew His omnipotency to the Nations, by the revelation of the wonderful and incredible things of nature; of which, tranſmutation of metals is not the leaſt, which in the third part of this Mineral Work I ſhall deliver to the laſt age, (being acceptable to God) to the profit of my neighbor, and for demonſtration ſake. Wherefore I now paſs over ſuch things, with a firm hope, that this faithful Admonition ſhall be received as an undoubted and infallible truth.

How the aforeſaid Regulus *of the flowers and droſs of Antimony, is to be uſed in the bettering of courſe Metals, ſhall be ſhewn, that ART may not be abuſed.*

THE Antimonial *Regulus*, a radical metallick humour, may help to perform wonderful things, for being reduced to a water without a corroſive, it reſolveth all metals, cleanſeth, waſheth, and purifieth them, and turns them into a better ſpecies, ſo that particularly not a ſmall gain may be from thence received. But how it may be reduced into water, and how by its help metals may be reſolved, volatilized, and again fixed, hath been demonſtrated by *Artephius*, *Baſilius* and *Paracelſus*; wherefore we need not here repeat their writings, but refer the Reader to their works.

But not only the *Regulus*, but alſo all Antimony may many waies be uſed in the ſeparation of metals, *viz.* For the extraction of hidden Gold, which can-

not be done without Antimony; as ſhall appear by the following example. When you find a marcaſit or other ironiſh foſſile, that will not yield to the tryal by lead, add to it three parts of Antimony, and being well mixt, melt them in a covered crucible, and being melted, pour it into a cone; and when all is cold, ſeparate the *Regulus*, which purge again by fire as before, and thou ſhalt find gold contained in the aforeſaid foſſile: And if it be indued with more plenty of gold, for it is not all drawn out at one time, *viz.* with the firſt *Regulus*, another *Regulus* is to be melted, by adding more iron and ſalt-petre, which is alſo of a nature near to *Sol*. And if theſe marcaſit foſſiles are not ferreous, you muſt in the firſt fuſion, add iron and nitre to them, or elſe they yield no *Regulus*. By the adding more ſcales of iron, more *Regulus* is made, and for the ſame uſe as that is, of which above in the fuſion and ſeparation of extracted gold; weights alſo may be made out of the droſs. And thus are *lapis calaminaris*, marcaſit, kobolt, zink, talc, and other foſſiles ſeparated, *viz.* containing gold.

But all gold containing iron (as that of Stiria, Carinthia, the Granacia, and of Tranſylvania, *&c.*) may this way be eaſily ſeparated with profit, by the help of iron. And if the iron have no gold, yet if the Antimony have it, it may thence be ſeparated by fuſion with iron, *viz.* if it be brought to a *Regulus*. The reſt of the Antimony may again be fuſed with new iron and new glaſs of more weight than it, but leſs than this, and be reduced into a *Regulus* fit for the following uſes. Out of the droſs let weights (that nothing may be loſt) be made, that thou maiſt have the more gain; as may appear from the following example.

When you have the Antimony, a hundred of which contains two duckats, if you will ſeparate the gold; take a hundred [weight] divided into three or four parts, fuſe it according to art, adding a little iron and ſalt of aſhes, and reduce them into ſmall *Regulus*'s, weighing a pound or two. Then melt the droſs with half the weights of the iron in a large and ſtrong crucible, and thou ſhalt have more *Regulus*'s about fifty pound or more, droſs 40 *lib.* which make weights of, or elſe guns, *&c.* the reſt, about eight or nine pounds, will vaniſh into ſmoak. And ſo thou haſt reduced the gold contained in a hundred weight, into one or two pounds, which thou maiſt ſublime by fire into flowers (leaving the gold in the fire) for its uſes, but thoſe 50 or 60 pounds of the *Regulus*'s prepared by adding much iron, they having little or no gold, you may mingle with tin for its beauty, hardneſs and ſounding, to make divers ſorts of houſhold-ſtuff, as platters, diſhes, *&c.* for tin mixt with the *Regulus* looks like ſilver for whiteneſs and hardneſs, and ſounds like it, nor is it ſo eaſily dulled as unmixt.

Now let us weigh what gain may come from the ſeparation of the meaneſt Antimony. Put caſe that a hundred weight of Antimony be ſold for three Royals (for ſo for the moſt part the Polonian is ſold, than which, although that of *Hungaria* and *Tranſilvania* be dearer, yet this hath more gold) to which add 60 pound of iron, which is ſold for half a royal, and the charge of coals and crucibles requiſite be half a royal more: the total of the expences is four royals, for which take two duckats in gold, ſixty pound of *Regulus*, eighty pound of droſs, and one or two pound of flowers. Thoſe 60 *lib.* of *Regulus* may be ſold at the price of tin, whereof a pound is ſold for a quarter of a royal, and then their whole price is fifteen royals. Then the eighty pound of refuſe made into weights, may be ſold at forty ſhillings, or at leaſt twenty four ſhillings, or half a royal; and all things being conſidered and reckoned, as they ought, there may remain the value of ſixteen royals.

And though the Antimony ſhould yield but one duckat, and a pound of *Regulus* ſhould be ſold at the eighth part of a royal, yet the remainder would be above ſix royals: And in a day there may eaſily be two hundred weight ſeparated by two men. And then ſuppoſe it ſhould contain no gold (as ſome Antimony doth not) yet may four or five royals be gotten daily.

But when you have Antimony, one hundred whereof contains three, four, or five duckats, and iron requiſite to the ſeparation containing one or two ducats, then there is ſo much more gained. Then let him that undertakes this buſineſs ſeek for the beſt Antimony and iron, and he may well gain in a day twenty, thirty, and ſometimes ſixty royals.

N. B. And if you ſhould have ſo much *Regulus* that you could not mix all of it with tin, for want thereof, then it may be ſold in parcels, ſo that one ℔ may go at a fourth part of a royal; by which means the daily gain may not be diminiſhed, but may be rather encreaſed; as may be ſeen by what follows. The *Regulus* of Antimony is the maſculine ſpecies of Lead; whoſe firſt being is gold impure and immature: but the firſt being of common Lead is impure and immature Silver; as experience witneſſes; for Antimony being purged and fixt, yields gold, but the common lead only ſilver. And becauſe Antimony, which is better than common Lead, is called the *Philoſophers lead*, or their *ſecret lead*; of many ſo named, but known of few; not that the thing is unknown, or of an unknown original, but by reaſon of its hidden proprieties; therefore I ſay that its vertues are not all to be known by any mortal, though he ſhould have a hundred years to ſearch into wonderful nature, for it is unſearchable, and the creator of all wonders, let him injoyn himſelf ſilence, neither let him glory in the knowledge of it, who hath not made tryal of it; for in it, through it, and by it, Nature and Art do ſtrive for perfection. Of which more elſewhere.

Now follows the Uſe.

HAving mentioned *Antimonial Regulus*, which is Lead and better than the common. It muſt alſo purify impure metals, waſh them, ſeparate the occult Gold and Silver in them; that which the common Lead can do, to which, if thoſe be added, it attracteth the more impure part in the Cupel, which it converteth into droſs, and draweth down with it into the porous aſhes, leaving the purer Gold and Silver in the Cupel: but from ſome Tin and Copper not yielding to the Lead, nor willing to be waſhed by it, it cannot extract their Gold and Silver; neither hath any one written the way of ſeparation by it. *Lazarus Erker* indeed hath deſcribed (and others alſo) the way of ſeparating Silver from Tin and Iron, which is not to be diſeſteemed if it be accidentally mixed with Silver, which is ſeparable that way, but not ſo, being generated in, and radically mixt with them,

requiring other Lead, willingly embracing Tin and Iron, which nothing but *Regulus* can perform.

But seeing Tin and Iron do for the most part, contain much Gold (but chiefly Tin) *viz.* inseparable by the common way, it will be worth our pains to seek another Lead and way of separation; as it is apparent to Refiners, proving Tin and Iron by the common way on a test; whilst Tin and Iron melted in the Lead, do forthwith shew their stubbornness by innate proprieties and forsake it, *viz.* as a contrary rising to the top like dross or ashes, without any separation, Gold and Silver being excepted, if accidentally mixt together, which are left with the Lead; but not so being hid in their middle or center. But that the truth hereof may appear, I will demonstrate it by example: Place on a test under a tyle 16. parts of Lead, and one of Tin, after the manner of proofs, give a fusing fire for to separate the dross; and all the Tin almost flying away, will at the bottom be burnt, and separated like ashes, being sublimated on the top of the Lead; not deprived of its Gold and Silver incorporated together, which afterward I shall demonstrate, when all the Tin is sublimated from the Lead, and calcined, and the test taken from under the tyle, and the rest of the Lead poured off, and you shall find after cupellation no more Silver than the sixteen parts of Lead did contain before, if they had been cupelled without Tin; sometimes less, some part being taken away by the Tin in the examination: the same is done with Iron, altho' thou shouldst add Copper with glass of Lead, to retain the Tin and Iron, thereby to separate their Gold and Silver, you would effect nothing: for although some more Silver may hereby be extracted, yet that would not come from the Tin or Iron, but from the Copper: it may therefore be extracted another way, of which, hereafter.

In the mean while I will prove clearly, that the separation of tin and iron by common lead, thereby to get their gold and silver, is of no value, which being left in them, are turned into ashes and dross.

Take any tin, and reduce it into ashes by lead, or agitation, on a smooth earthen vessel (tryed before, by the common way, for distinction sake, which calcine well, that the corporeal tin powdered, may be calcined, or being melted, may be separated from the ashes. Then take of these ashes one part, and of the following flux, or of that a little after six parts or more; being mixt, fuse them in a strong crucible with a strong fire, until the Flux have Consumed or drunk up all the calx of the Tin, and of them both shall be made one, *viz.* yellow or red Glass, which may be tryed with a crooked wier put in: which if it seem not clear, the crucible must be covered again, and a greater Fire be given, until the Fire be perfect; which labour in one half hour is finished: which done, pour it into a brass mortar, afterward to be covered, until it be a cold, that it leap not out and be lost.

Afterward powder it, which with calx of Tin, mix the equal weight of filings of Iron; being mixt, put them into a strong Crucible (becausse the Flux is very penetrative) covered, and give a strong Fire for fusion half an hour: which done, pour it out, for the Tin hath made separation, and reduced some part of the Lead out of the Flux, sinking to the bottom to be separated when it is cold, to be reduced into dross on a test, and then to be cupelled, and you shall find grain Gold drawn from Tin without Silver. And if before you weigh the calx of Tin by the lesser Hundred weight, and after that the grains of Gold, you may easily conjecture how much Gold is contained in the whole hundred weight of Tin ashes, *viz.* at the least 3, 4, 5, or 6. *Lotones*, or *half Ounces*, if thou work aright.

See then the Fault is not to be imputed to the metals, but us, being ignorant of the separation of the Gold and Silver.

You should not perswade your self by this means to get much wealth out of Tin; for I have not written this for that end, but only to demonstrate the possibility. And if thou think that Gold will come out of Iron by the fluxing powder, mingle then filings of Iron with the Flux, before thou put in the calx of Tin, and thou shalt find in so doing, that Gold doth come neither from the Flux or Iron, but out of Tin; then being hereby assured, that 'tis the Tin which contains Gold, thou mayst consider, how most conveniently that may be extracted, *viz.* with other Lead, and another way, as shall be hereafter taught. Neither think that Tin contains no more Gold than you have heard; for more there is if you can wisely extract it: neither do I deny, that more Gold may be extracted out of the Tin, but more care than this is to be given, if you desire more plenty. But Gold may thence be extracted, not only by Flux, but diverse other wayes, in diverse weights; for what is written, is only for demonstration of the possibility, that the Gold contained in the imperfect metals, may be extracted by a secret separation.

The Fluxing Powder requisite to this Work.

℞ one part of very pure and white Sand, or Flints, having no Gold fusible; to which, add three parts of Litharge of Lead; being mixt, fuse in a very strong Fire, that thereof a transparent Glass may be made of it, which pour out, that it may be cold, and reduce it to powder; which use in the aforesaid manner. But you may ask, why Sand and Flints are mingled, seeing they are not of a metallick nature: to which I say, the calx of Tin, cannot, as also other Fossiles be Examined by Lead alone, for the following Reasons, *viz.* becausse in the Calcination of Tin, its metallick nature is hidden, but the impure and earthy parts are manifest, wherefore it hath no longer affinity with Lead and other metals; unless the hidden parts of the lead be manifest, and also other metals and the manifest be hidden, for then they easily embrace one the other, and are again mingled well, and not altered.

What belongs to the alteration of other metals doth not belong hither; for to this place only pertain Lead and Tin, the alteration of which is demonstrated by this tryal; whereby it appears to be thus.

Lead reduced into ashes, by it self, or into Litharge, and deprived of its metallick form, cannot so in this work be used without the flints or sand, for the following reason. The lead and glass thereof made by it self is very fusible and volatile; but the calx of tin is very difficultly fused: which two calxes, although they should be mingled to fuse in a crucible, yet would not be mingled, nor being

being fuſed, embrace one the other, by reaſon of the difference of their fuſibility; becauſe the calx of lead alone being fuſed by a ſmall fire, will perforate and penetrate the crucible, the calx of Tin being left in the crucible: wherefore you muſt add ſand or flints to the lead, *viz.* to hinder its fuſibility, that it may endure the ſame degree of heat with thoſe that are difficultly fuſed, and further their flux. For like things do mutually affect and embrace each other; as water doth water, oyl oyl, and glaſs glaſs; and metals other metals; but water is not mingled with oyl; neither are glaſſes mingled with metals, but metals with metals, and glaſs with glaſs, whether it be made of metals or out of ſand. Wherefore they greatly err who mingle the calx of metals difficultly miſcible, or other hard things with lead to prove or examin, not conſidering that corporeal lead hath no affinity with them: who remaining in their errour, and not weighing the thing further, conſequently can find nothing of any moment.

But when the calx of metals united with lead by a *medium*, as flints or ſand, are brought together into tranſparent glaſs; then the lead being precipitated and ſeparated from the mixture, it cannot be, but that the gold and ſilver contained in them muſt be carried away with it. This is a true and philoſophical tryal, and not to be contemned, for many things may be by it performed.

N. B. But this is not to be paſſed by, that in the mutual mixture and fuſion of the glaſs of lead and the calx of tin, and other hard metals, one may eaſily err, *viz.* in the precipitation (which is done with the mixture of iron) of the gold with the lead into *Regulus*, by either the exceſs or defect, ſo that nothing may be gotten, which is committed in precipitation. For if the mixture ſtand long in the fire not fuſed, it is burnt, ſo that it cannot well be ſeparated, and if it ſtand too long fuſed in the fire, the gold is attracted by the droſs, by reaſon of the mixture of the iron, having great affinity with the gold, ſo that by this means nothing can be gotten: wherefore the Work is to be done warily, and with wiſdom and induſtry. You muſt have a care you burn not the *Regulus* of lead with too much fire, when you reduce it into droſs; for fear of attracting the gold from the iron, and turning it into droſs. And although this may by Art be prevented, yet we muſt not preſently create every one *Maſter of Arts*, it requiring diligence and daily exerciſe, beſides the reading of Books. But this Secret ſhall other where be communicated.

This admonition then I give, that thou do not impute thy errour (if thou doſt err) to me, but to thy ſelf, for what I have written is true: and do not thence infer an impoſſibility of attracting gold by iron, out of lead, and of turning it into droſs, which is no wonder to me, though it may ſo ſeem to thee. Which he who hath the knowledge of metals will himſelf eaſily perceive. But that thou maiſt be certain, try the certainty after the following manner: Take two hundred *lib.* of lead, of the leſſer weight of the Refiners, put it on a teſt under a tyle; add eight or ten *lotons* of pure gold, of tin two or three *l.* ſix or eight of iron, *viz.* of the leſſer weight: make them flow together an hour to make droſs; as Examiners uſe to do; then pour it out, and ſeparate the lead from the droſs, *viz.* to cupel that which is ſeparated, then weigh the grains of gold left, and thou ſhalt find half of it conſumed by the droſs. If this happen to corporeal gold and fixt, How will it be with that which is newly extracted out of an imperfect metal? Therefore you muſt diligently ſearch out the natures of metals, and then ſuch caſes will not ſeem incredible.

From hence then, and other Examples mentioned it appears, that that ſeparation which is done by teſts and cupels, is not true and legitimate; and conſequently, that another profitable ſeparation of metals is to be ſought; becauſe by this the greater part of gold and ſilver burns into droſs, witneſs Experience, for which cauſe the former example was alleadged; whither belongs the proof, *viz.* how much gold the droſs hath attracted, which is done as followeth: *R.* the remaining black droſs, to which add a double weight of ſalt of tartar, put it in a crucible filled but to the half (for fear of boyling out) and covered, that nothing fall in, under a tile or among live coals, one or two hours ſpace to digeſt; and a new *Regulus* of lead ſhall be precipitated, which ſeparated from the droſs, you may cupel, and you ſhall find new grains of gold attracted by the iron in the droſs, and now ſeparated by the ſalt of tartar, overcoming the force of the iron. And ſo you have heard from two examples, how in the coction of the ſeparation gold may be drawn out of the lead by tin and iron, and that therefore there is need, that gold be ſeparated by the *Antimonial Regulus* out of the aforeſaid metals, and not by lead, if you would extract the true ſubſtance with gain.

N. B. Gold may likewiſe be ſeparated out of the glaſs of lead (being firſt diſſolved with the aſhes of tin) with coal duſt, adding it in the flux and ſtirring it with an iron wier; and alſo with common ſulphur, by burning it on it: but the aforeſaid way with iron, is to be preferred before thoſe two which ſpoyl the gold, *&c.* wherefore the remaining droſs is to be gathered, which by ſome abſtracting furnace by other means may be tryed, for to recover the ſpoyled or loſt gold and ſilver.

And all theſe are alleadged to demonſtrate that the gold in tin and iron is to be ſeparated by the *Antimonial Regulus*, and not by Lead. But how this ſeparation may be perfected, you ſhall hear in the third part, where we will treat of lead, explained by *Paracelſus*, in his book called *Cœlum Philoſophorum*, and other artificial Chymical labours: wherefore here we omit it, being ſuperfluous to handle one thing in divers places. In the mean while exerciſe thy ſelf in leſſer things, that thou maiſt be more fit for greater when they ſhall be ſet forth. But wonder not at my liberality in publiſhing ſo great ſecrets, for I have reaſons for it. Such a burden is too much for me alone, neither doth it profit the Covetous to ſell his goods to them which keep not their words, nor pay the money, after they have obtained their art, which hath hapned to me. Wherefore I have determined to communicate ſome ſecrets to all the world indifferently, that the poor may receive ſome profit by them; knowing that though I write plainly, yet that all will not at the firſt view obtain their deſires. For ſome are ſo dull, that they cannot imitate a work though often ſeen. For ſome have often viſited me, to ſee my new manner of diſtilling, which though it was ſufficiently demonſtrated to the eye, yet they could not imitate it, till with often peruſals at length they have found the

right path. Others have left it as too hard a work, when it would not presently succeed, which if it happened to those who had an ocular demonstration, how much more difficult will it be and hard to them who have nothing but what they have heard or read. Wherefore I am certain, that though I should publish every one of my secrets, yet could they not be performed by all men, my coals and materials being left sufficing for my necessity. Wherefore I fear not to publish, the next opportunity offered, divers profitable and excellent secrets, *viz.* in favour of all and every one.

As for that spirit of salt necessary to this work, you may find it in the first part of my Philosophical Furnaces corrected and amended; but the way of separation in the fourth part.

And so I finish this work, being published in favour of those who by war (though honest men) are reduced to poverty. But what things are deficient in this little tract shall (God willing) be delivered in the next (which shall follow in a short time) largely and clearly without fraud.

FINIS.

THE

SECOND PART

OF THE

Mineral Work.

Of the Birth and Original of Metals and Minerals, viz. *How they are produced by the Starrs, and take to themselves a body out of the Water and Earth, and are found in a sundry shape. Written and brought to light for the sake of the Diligent Searchers of Nature.*

A Preface to the Reader.

Courteous Reader,

WHereas in a former little Book, lately by me published, I mentioned this little Tract of the Generation of Metals, and through want of time, could not hitherto make it publick, although earnestly desired by men of the meanest and highest condition: I have now determined to spare so much time from my other Imployments, as to do this Work for the publick good, no ways doubting, but that (although this my opinion of the Generation of Metals, doth not agree with all the Philosophers) *yet will it get credit from, and the assent of not a few quick-sighted men.*

That which I here declare, I do not exhibit with flattering words, or many circumstances, or the testimonies of other Writings, but with a naked and genuin simplicity; for which very cause I would not make this little Tract too prolix, but have unfolded my mind with the most Compendious stile that I could. But let none think that I endeavour to weaken and nullifie the Opinions of other men concerning the Generations of Metals, and obtrude mine in the World, no, not in the least: I leave to every man his free will, and the Liberty of viewing others, who have written Monuments of this thing, and of comparing of them with my writings, that he may evidently perceive which of the two Corresponds most with Nature and Truth: I aim not at any Honour hereby, as if I were wiser than the common sort: Nor do I reap any benefit by making this little Book, but 'tis done only for this end and prrpose, That (because I have formerly written of Metalline things, and have also made mention of this little Tract of the Birth and Nativity of them) I may give light unto my Writings, and render them more easie to be understood; for I should most bitterly suffer, if but one only should be lead into errour by my Writings, but I trust that the light is springing up unto many, by the guidance whereof they will more cautiously handle than hitherto they have done. Let the Benign and Merciful God, our Father of all things, of whose Wonders the Heaven and Earth are full, give unto His poor needy Children that which may tend to the Glory of His most holy Name, and to our health.

OF

OF THE

Birth and Nativity

OF

METALS.

THere have alwaies been many, and various Opinions concerning the Original of Metals and Minerals, *to wit*, of what matter they are first of all generated in the Bowels of the Earth; and how come to such a fixity, insomuch, that a young Beginner in this hard Science, hath been in suspence; which of them he should assent unto, and by what Phylosophy he should direct his course.

And whereas, throughout the whole Universe in so many Nations, there are so many men, both of high and low degree, as well Learned as unlearned, who busily seek at this day, to get their Felicity from the Metals; and whereas, without the true Knowledge of them, nothing at all of profit can be had (for by what means I pray can any one convert any imperfect Metal into a better, if he be ignorant of what Parts it is composed; into what Parts it is to be resolved before that it can obtain a more Noble Form) and that the Knowledge of their Generation is worthily necessary for their Melioration; we will in a few words clearly evidence, What is to be considered as to their Nativity. Although the whole Company of Phylosophers do almost unanimously testify, (but yet in succinct, obscure, and ænigmatical Terms) That Metals receive their Generation from above, by the force of the Stars, and are produced in the bowels of the Earth; yet some there are, who contend very ignorantly. and affirm, that Metals have not any seed at all, as other Animal, and Vegetable things have; and that (upon this account they have no propogating faculty, but were produced such in the belly of the Earth, by GOD in the first Creation of things. But this Deceit is too grosse, and palpable, and may be met withal most easily, by daily experience, declaring the contrary. For when being found in the Earth, they are by the Miners brought to light, we abundantly, and ocularly perceive, that even now they daily grow, and will not cease from this motion, unless rob'd of their Vegetable Vertue and Life, by external Accidents, which very thing convinceth the Opinion of Errour. Some there are, who teach that God, when he made the World, did instil into the Matrix of the Earth, not the Metals themselves, but their Seed only for its own propagation; which, if so, then long ago, would this Seed have afforded a new harvest of it self (of which, no footsteps are any where extant) by its own absolute Vegetation. Know therefore, that the manner of the Metallick Seed is far different from that of the vegetable and animal Seeds, which are perceptible to the sence of sight and feeling.

For the Metals are not all together created in the beginning of things, but begotten in length of time, out of the bosome of the Elements; and on them, being created by the Omnipotent GOD, is this Command injoyned, and this Power implanted, that they should give growth to all things, by their Vertue and Efficacy; for accomplishing of which thing, the one cannot in the least want the Company of the other.

For the Stars or Elements of Fire, delivers out the metalline Seed out of its own bowels; which the air carries down into the Water, that it may adapt to it self, a palpable form or body, which the Earth (embraceing it) doth cherish, nourish, and augment from form to form, until it comes to be a perfect Metal, which it (at length) brings forth into the light, as a Mother doth her mature young one; which Conception and Generation of the Metals, taking its Original at the very beginning of the World, will alwaies continue even unto its Dissolution.

For by the efficacy of the Elements, new things are from thence generated, and contrarily, old things are destroyed; which thing is not only done in Metals, but most apparently in Vegetables and Animals: for none can deny, but that various Hearbs, and little Animals are produced upon this Stage, by the alone vertue of the Elements, with-

out planting of the Herbs; and without the Seed of the Animals, which to purſue, I could lay down many Documents, were it needful, but 'tis altogether needleſs, to ſay any thing of that, of which none are ignorant. And now, who will not believe, but that the ſame may be done in Metallicks. God Omnipotent hath implanted in the Starrs, or Element of Fire, the vivifying prolifick and ſeminal vertue of all things, which power it doth not keep ſhut up within it ſelf, but ſends and lets it down by Divine appointment into the earths center, by mediation of the air and the water; which fiery beams ceaſe not, by reaſon of their implanted impulſe and vertue, to go forward, until they do at laſt meet with a place, beyond which it is impoſſible for them to go, nor can they ſtay there any longer, but leaping back from the center unto the circumference, are diſperſed throughout the whole earth, cheriſhing and impregnating it: which thing, unleſs it were done, and thoſe ſidereal vertues ſhould remain in the center of the earth, and never flow upwards, nothing at all would grow upon the Earth. But becauſe heat, and whatſoever is of the fire, is endowed with this nature, to go forward as far as it can, and where it can go no farther, 'tis ſtruck back, and leaps from the center to the Superfices; which thing is evident in a burning-glaſs, whereinto when the Solar beams fall, and cannot penetrate the compact and poliſht metal, they are diſperſedly forced backwards, and in thoſe fiery beams, whilſt (every where) they leap back, do in the poroſity of the earth ſnatch up, as it were, a fat humidity, adheres thereto, and by mutual mixtion are coagulated into a certain palpable Eſſence, out of which, according to the purity or impurity of the place, a pure, or an impure metal is with length of time produced; becauſe a metal doth not preſently become ripe in the ſame moment of time, but the Seed of the Metal is by little and little nouriſhed and increaſed in the matrix of the earth, with the heat of the central fire, until it attains its perfection.

Like as in the generation of Vegetables and Animals, it comes in uſe, whoſe ſeed being received into the ſuitable matrix, takes encreaſe from thence by little and little, until (if no obſtacles prevent) it obtains a predeſtinated and appointed form, whence 'tis, that according to the purity of the place the metals are alſo varied: For it is but one only ſeed out of which Metals and Minerals do proceed: but the place and other accidents are the cauſe of their Unlikeneſs, as we ſhall prove in the ſubſequent writing.

But to ſome men it will ſeem monſtrous, that I ſay there's a place in the middle of the Earth, the which nothing can paſs through or penetrate, but is ſtopt; that which is heavy remains there, but the more light is carried backwards: which opinion it will be worth while briefly to explain.

In the Creation of the World, the Elements being as yet not ſeparated each from the other, but being a *Chaos*, God inſtituted their ſeparation, and ordained a place where the more ponderous part of the maſs ſhould be ſeparated, (which is the Earth) which thing is even continually done, becauſe every heavy thing or earth knits it ſelf to its aſſigned point, as a Bee doth to his hive, from whence at length this Globe is made or born, upon which we inhabit: Preſently after, that which was next in weight, the water, made its ſeparation from the other Elements, and encompaſs'd the Superfices of the earth, having the ſame center with the earth, inſomuch that if the earth were not, the water it ſelf would have chiefly or primarily encompaſſed the ſtable and founded point of Gravity or the Magnet; but becauſe the earth exceeding the water in ponderoſity, doth intercede, it worthily aſſumes its appointed place, and takes the waters upon its back.

Now, as the other two Elements, the lighteſt of them, the Fire, God likewiſe ſent to its proper aboad, a place moſt remotely diſtant from the inferiour Globe of the heavy Elements; the other light Element, the Air, being the *medium* between the fire and the water, God hath ſet it between them two, that conſtantly touching each the other, they might mutually circulate, cheriſh, and uphold each the other, until being at length diſſolved, they are reduced into their own nothing, from whence they were produced.

For the Fire cannot burn without the Air, nor the Air be conſerved without the Water, nor the Water be nouriſhed without the Earth, nor the Earth (being as it were dead) bring any thing to light, except the Element of Fire doth firſt ſpiritually inſtill thereinto its own ſeed, whence it is afterwards made corporeally and ſenſibility, ſuch as is neceſſary for all growing things.

And now, leſt what I have ſpoken (*viz.* that the Earth hath its own center unpaſſable by any thing, whereinto the ſidereal rays ſtriking, are contracted into a ſtreight room, and (driven back) from thence are ſublimed and diſtilled throughout the whole Orb, from which all kind of Metals and Minerals (by the help of the Earth and Water corporifying them) are produced) may ſeem a fable

Know, that this Philoſophy is demonſtrable by many uncontroulable reaſons; which Philoſophy I do not my ſelf only embrace, but alſo many more have done, 'mongſt whom the moſt famous *Sandivow* is not the leaſt, who writ, That in the Earths center is a vacuity, in which nothing can reſt, the which thing even the reaſon or order of Nature ſeems to evidence, in whoſe middle point a void place is neceſſarily requiſit, into which all the vertues of the Stars may pour out themſelves, may mutually operate upon each other, and excite a marvellous heat, permitting neither delay or quietude for any thing in that place: but from thence, even the unbroken vertues of the Stars are by little and little enforced to go back unto the circumference, where joyning themſelves to the moſt pure earth, they exclude a metallick child; ſo that you need not wonder, becauſe of that moſt intenſe heat that ſways there, when as all the Aſteriſms, the Sun, the Moon, the other Planets, with Starrs innumerable, do into that place inject their powers with all their might. If you conſider but the ſolar magnitude only, being by Aſtronomical Calculation 64 times the bigneſs of the earthly globe (omitting to ſpeak of the other innumerable huge bodies, that jointly caſt their influences into the belly of the earth) what an unſpeakable furious heat thinkeſt thou that all theſe will give, which in the center of the earth muſter up their vertues, and make them manifeſt and efficacious: Conſider a little how much one pugil of the Sun-beams can do, being taken in a concave glaſs, or a metalline ring well poliſhed, or any other inſtrument, and ſtraightened into the center for a concave-glaſs rightly made, having but the Diameter of a ſpan, doth eaſily burn wood, or any combuſtible body; but if the Diameter be two

ſpans,

ſpans, it melts with the Sun, Lead, Tin, Biſmuthum, and other metals eaſily fluxible; if 4 or 5 ſpans, then it melteth Copper and Silver, and ſo mollifies Iron, that it may be wrought upon the Anvil. If now experience evinceth this thing, that a little handful of the beams collected and ſtrengthened into a point, be of ſo great force as to melt even metals, and to fume away ☿, ♂, and Arſnick, Auripigment, Koboltum, and other volatile and immature metals of like kind; what thinkeſt thou would be, if the beams were congregated the compaſs of 10 or 20 fathoms, doubtleſs they would burn up all other metals, except Gold, like a flame, and elevate them into fume? And what are 10 or 20 fathoms, if compared to ſo many thouſands of thouſands which are attributed to the Sun, whoſe heat (paſſing by to ſpeak of the other great Starrs) if it were congregated into one place, (which is ſo done in the earths center) what an incomprehenſible burning heat, thinkſt thou, would be there? verily nothing would be fixt enough to reſiſt the burning; and indeed there is nothing in reality that doth reſiſt it, whence neceſſarily that point is vacuous wherein nought can reſt or remain.

Thou wilt object, that I ſpeak of many things, but prove a very few; for who was ever there, and beheld ſuch a Cavity? I Anſwer thus, that albeit, there be no ocular Teſtimony of this thing, yet naturally Phyloſophy affords Teſtimony ſufficient, whereby 'tis in very deed demonſtrated, that ſuch a place there is: now none denies, that the Sun and Stars by their motion do inviron the terreſtrial Globe, and imprint their beams thereon, which being granted (for no ſober man will contradict this) it alſo follows, that thoſe hot and inviſible beams do by an innate force and vigor go forwards, until they are ſomewhere ſtop'd, and a further progreſs prohibited them; which thing is done in the middle moſt point of the Earth, or all the Phyloſophers are altogether Lyers, who unanimouſly believe, that the heat is carryed directly forwards, and not backwards: but behold an apparent Example of this thing: Put a Coal upon ſome thick braſs, or iron plate, and thou ſhalt ſee that the ſide under the Coal will firſt wax hot by the penetrating heat; take off the Coal and try with thy hand, and thou ſhalt find it hurtful by the overmuch heat; try alſo the under ſide of the Plate, and thou ſhalt find it to be but gentle warm, and after a little delay, try yet once again, and thou ſhalt find that the heat is gone directly forward, and that the underſide of the Plate is hotter than the upper part, whereupon the Coal lay.

Hence thou maiſt clearly perceive, that the heat never goes backwards, but is carried directly forwards; which being ſo, thou ſhalt be enforced to confeſs *nolens volens*, that in like manner the Aſtral heat ſticks not in the Superfices of the earth, but pierceth even to the very bottom center.

Well, but thou wilt again object, If the Sunbeams deſcend through the earths thickneſs, even to the very center, Whence is it, that the whole earth grows not hot thereby, or at leaſt ſo warm as it is on the ſurface? for 'tis found by experience, that the digg'd-up earth is not warm, but cold, and no heating beams are therein perceptible. Take this for an anſwer, That the diſperſed beams of the Sun do not diſplay their efficacy, but only in thoſe places where they are collected and become ſenſible; a hint of which you may obſerve in the earths ſurface it ſelf; where a ſpeedier paſſage being not permitted, but through the hardneſs of the ſtones, and its own denſity, there being a ſtop and obſtruction, the heat becomes duplicated, and manifeſtly augmented, inſomuch, that in all very hard rocks and clifts there is ſometimes created ſo great a heat by the continual Conflux and Condenſation of the Sunbeams, that if accidentally, wood or fuel be laid thereto, it burns and flames up, which never happens in a thin and porous Aire (how near ſoever to the Sun) it being uncapable of ſtoping thoſe beams; for by how much the higher you aſcend into the Aire, by ſo much the more intenſe ſhall you find the Cold to be; inſomuch that the moſt Touring Mountains, altho' poſited in warm Countries, are alwaies covered with Froſt, Ice, and Snow, when as in the bottom of thoſe Hills, the Ground is very warm, and brings forth varieties of Fruit, although it be more remote from the Sun: The cauſe of which Cold in the Tops, and of Heat in the Bottom, only conſiſts in the reflection of the ſolar Beams, which are ſtayed and multiplied below; which thing cannot at any rate be done in the Fire that is above.

Theſe beams having firſt paſſed the ſuperfices of the Earth, where they were a while joined and multiplyed, are by little and little debilitated, and return to their ſimplicity; whence it comes to paſs, that that part of the Terrene Globe, which is furtheſt diſtant from the Centre, hath as little heat, as the Aire on high: but if it were poſſible to aſcend higher, and nearer to the Sun, the heat would by little and little be encreaſed, and be found greateſt at the Sun it ſelf: In like manner may a Compariſon be made about the Earths heat, which near the Surface is very faint, but nearer the Centre, more and more encreaſing; (there being its Seat and Collection) ſo that the middle Earth, between the Sun (from whom the heat flow) and the Centre, where the whole being gathered together, is repercuſſed, may deſervedly be eſteemed the coldeſt part; of which truth, a certain demonſtration is readily produceable.

For when in the hotteſt day of Summer, watry Clouds are elevated by the Winds, higher than ordinary, they are made pure Ice by the force of a moſt intenſe Cold, which fall down in little bits of that form or ſhape, which they were imprinted with by the Aire, to the great detriment of Vegetables; and is by us call'd Hail, and ſo cold, that we are not able long to hold it in our hands, and uſually lies ſome daies in the Suns heat ere it melts by the warm Aire, and returns into Water.

Now then if there were not a great Cold in the middle Region of the aire; whence is it, that thoſe Clouds are ſo frozen; and who knows how great the Cold is, where the Aire, in its own middle point, is moſt of all cold; doubtleſs it is ſo great, that no living thing is able to live therein the twinkling of an eye, but would incontinently be tranſmuted into a ſtone, even as we have frequently perceived the earthy Exhalations born up on high into the middle Region of the Aire, to have been there coagulated, and compacted into the moſt hard ſtones, and ſo to have fallen down; and not only ſtones weighing ſome pounds, but alſo metals too, and chiefly iron of a great weight, repreſenting the ſhape of many conglomerated drops, have been in that part of the Aire condenſed out of dry Exhalations, and thrown down thus concreted;

the which thing others have handled more at large; whence 'tis ſufficiently evident, that the Sun-beams, in ſuch places as they can freely paſs through, without any impediment, give not any heat from themſelves: but only where they are detained and fixt, and by how much harder the detaining matter is, by ſo much it cauſeth a better heat. Thou alſo ſeeſt that Wood, or any porous Body never contracts from the Sun, ſo great a heat, as a ſtone doth; nor doth a ſtone, ſo much as a metal, although all placed the one by the other, to the Suns heat; the cauſe of which diverſity, doth alone conſiſt in the pores, of which ſome bodies have more, ſome leſs; thereby granting a more ſpeedy paſſage to the heat; for 'tis (as I have often ſaid) the property of the heat, to haſten directly forwards, as long as 'tis not impeaded, and extreamly unwilling to go back. A Teſtimony whereof, as well the Kitchen Fire, as the Solar, or Fulminous Fire affords unto us; for if any body ſitting near the Fire, hath caſually in his pocket, any metal, be it a key, knife or money, the heat (eaſily penetrates the thin Garments) lights upon the metal, whereto it adheres and augments; and gets ſo much heat, that ſometimes it cannot be held in the hand; but the cloathing, although nigher the Fire, is ſcarce gently warm; the ſame thing uſually falls out in Thunder, whoſe Fire, becauſe it flyes very furiouſly, if it hath not room to paſs the pores of ſolid withſtanding bodies, it diſſipates and diſſolves them in a moment, and leaves porous bodies whole, which Lightning, often melts the ſword in the ſcabbard, or money in the purſe, the Receptacle of them being whole: It alſo breaks the hollow and marrowy bones of Animals, the fleſh remaining whole and ſound; the Cauſe thus, for that this fulminous heat moſt ſwiftly penetrating, is deprived of time to penetrate, and warm a metal by degrees, and will not return backwards, contrary to its own nature, and therefore ſubdues and conquers the weaker Element by force and power; for Fire only is the moſt potent of the Elements, and knows not how to yield to the other three, but they are compelled to ſtoop to it, with which priviledge the ſaid Fire is from God endued, even from its very infancy.

In the ſame and like manner is it with the Sun's, Moon's, and other Stars heat, and occult Vertves, which by their efficacy, haſten on forwards ſo long, until they meet with that which they cannot penetrate, where making a ſtand, and heated as it were together, are compelled to go back, ſearching after a place to reſt, and become corporeal; for the chiefeſt heat being in the Earths Centre, gives not any delay to any thing, but continually drives back, what flows thither, into the porous and moiſt Earth, where the Beams being ſublimed and hidden, may cloath themſelves with a ſenſible Corporeity, and proceed from one degree to another, until they are well concocted into perfect Metals, no impediment intervening.

But let me not be miſtaken by any one, as if it 'twere my Opinion, that in the Centre of the Earth, the fiery place is conſtitute, of which the Scriptures make mention; for I have nothing to ſay as to that place; nor deſire to know ought concerning it. This place which I deſcribe, is diſcovered to us by natural Phyloſophy, but that place the Scripture makes mention of, I leave to Theologiſts, by which they may terrify the wicked Multitude, that they precipitate not themſelves raſhly, and by Troops thereinto.

And now becauſe the Helliſh Fire is here mentioned, I cannot omit to blaſt the moſt unſound Opinions of ſome putatitious Doctrines thereabouts: There are in many places found Mountains, belching forth, with huge force, flames, fumes, aſhes, and ſtones: In *Europe*, is the Hill *Ætna* of *Scicilia*; in Iſland, is *Hoctu*, behind *Norway*; there's alſo *Veſuvius*, adjoining to *Naples*, and many more other places in other Parts of the Earth; ſome part of which continually burn and fume; others at certain times and intervals; which places, many acconnt for the fumings of Hell. Heela

But verily this cannot be rational, becauſe thoſe burning Mountains have a natural Original, and Cauſe of Fireing, kuown but to very few; for in in ſome places are found Mountains wholly Sulphure which being kindled, either by the Central or Elemental Fire of Thunder, or any other accident cannot but burn, and when ſuch a Mountain hath but once taken Fire, and begins to burn, who can reſtrain the burning; no body, becauſe of the greatneſs of the Fire, and danger of what may happen, being therefore left to it ſelf, it feeds downwards, being never deſtitute of matter fit for the Fire.

And now if any one underſtanding by the Monuments of the Antients, that theſe Mountains have burned for ſome Ages, yea, and for Thouſands of Years, ſhould wonder, whence Fuel ſufficient for that Fire ſhould be had, let him know, that this may eaſily be done; that a Mountain ſhould burn without intermiſſion, not only for the magnitude of the Terrene Globe, in which a mountainous Wax, or Bitumen, Brimſtone, and ſuch like Combuſtible Things abound: But alſo, becauſe of the never-interrupted Motion of the Stars, whereby they never ceaſe repleniſhing the Earth with their out-flowings, and generating (beſides Minerals) ſuch Combuſtible matters as theſe, augmenting and cheriſhing the Fire.

But they endeavour to confirm their Opinion by the lamentable Howlings, which at ſome times are heard nigh thoſe Mountains; which Cryes, the credulous Vulgar People report to be of the Souls, which are loſt: But theſe are but Trifles; for thoſe Out-cryes are then only uttered, when the Mountains endeavour to throw out much Fire, otherwiſe they burn and fume very gently, which as ſoon as the Adjacent Inhabitants perceive, they well know, that they ſhall ſhortly have an Harveſt of aſhes, fire, & ſtones, out of the Mountains: and that they may avoid the hazard and danger threatned by the Fire, they carefully keep far enough off. And for the moſt part, a great Quantity of the Sulphure is prepared in the neighbouring parts, whereby the needy get their food, by digging it up, purging it from its Impurities, and preparing it for humane uſes; but as to the Cryes, it ſeems to be nothing elſe in my opinion, but only the Fire breaking forceable through the ſtreight Channels, the hard Stones and Caverns, and produceing thereby a dreadful ſound, which they commonly call Ejulation, or Howling. They alſo add, that about thoſe fiery Mountains, Ghoſts, Viſions, and Spirits uſually appear viſibly. This alſo is true, and Grounded upon Nature, but yet thou canſt not prove that they are Devils and infernal Spirits; there being even otherwhere ſeen, and found diverſe Spirits in the Bowels of the Earth, being Monſters not unwonted, or ſtrange to ſuch as dig, or are Miners, by which they are frequently injured; yea, and ſometimes

times deſtroyed, lamed or infected; ſometimes theſe ſpirits are hurtleſs and idle ſpectators, or playing with the workmens implements; or even labour themſelves not in the leaſt filling their Pockets, how ſtrongly ſoever they ſhew themſelves bent upon their work. But ſuch ſpirits appear in various forms, oftentimes reſembling an Horſe, a Dog, or other Beaſt, ſometimes a Dwarf-like crooked man; frequently they appear cloathed with an aſhy Cowle of a *Monk*; they uſually are Teſtimonies of great Felicity and rich Mines; ſometimes they do great miſchief, by choaking the Miners with a wicked habit, or throwing them headlong into the Pits, by reaſon of whoſe malice many of the rich Mines are unavoidable left undigged, they boldly defending their hidden Treaſures.

Let theſe things concerning the ſpirits, about the burning Mountains, or thoſe remaining in the profundity of the Earth, and appearing in the ſeveral ſhapes, be ſpoken by way of Parentheſis. And now I return to the thing in hand, and will demonſtrate, that there is nothing of Community betwixt theſe burning Mountains and the central or infernal fire, but that theſe blowout a thick and material fire; which I thus prove.

Firſt of all, Theſe Mountains do at ſometimes ceaſe to burn, breathing out ſmoak only between whiles more copiouſly: ſometimes they dye and expire through want of fuel to ſupply them.

But the central fire can never be either diminiſhed or vaniſh as long as the ſun ſhines and ſtarrs gliſter, and ſend down their vertues into the earths centre. Even as the infernal Fire ſhall never expire, the Scripture thus teſtifying, wherefore that fire, though a moſt furious Mountainous fire, cannot be either of theſe two, but is meerly material, ſubject to encreaſe and decreaſe, and its food deſiſting, plainly extinguiſheth: Beſides, the fire of thoſe Mountains heats not fervently, but for the greateſt part ſmoke obſcurely; but the adjoyning Earth is very hot, for the ſpace of ſome miles, ſo that you cannot long ſtand there without injuring your feet. The Waters alſo which flow down from them, are boyling hot, and manifeſtly ſmell of ſulphur a good Portion whereof they have within themſelves.

Beſides theſe flaming and ſmoaking Mountains, there are ſometimes found other Denns or Caverns, breathing forth neither Flame nor Fume, and yet a great heat, which is another kind of fire, which is largely treated of in the Chronicles of Metals, where amongſt other things, this is alſo added; That on a time a Wind gaping, aroſe in a certain Mountain, and ſent forth a huge heat, and in the night only was ſome ſplendor perceptible, aſcending towards Heaven, and ſometimes a breathing heat was only obſerved.

On this a curious *Monk* was in himſelf perſwaded to let down into the cranny, a pot, bound on an Iron Chain, with intent to draw up ſome molten Gold, which he believed to be thereunder, which when it came to touch the fire, it preſently melted and fell down, the which in like ſort burnt away like Chaff, with a good part of the Chain alſo, and was ejected and thrown up again in the form of a fume, with a great noiſe and crack, but the Monk hardly ſcap'd with his life, the gold being left behind in the Hell; but thou maiſt readily divine what ſort of fire this was, which reduced the Pot and Chain into fume in the twinkling of an eye, that it was not a material fire, becauſe void of ſmoak, but the aſtral fire.

It is well known to the Miners, that the central and gehennal fire doth oftentimes aſcend the high parts of the Mountains, and warm them, and there cheriſh and maturate the metals: which Caverns, when in their ſearching for Metals, they come nigh unto, they feel too much heat, that they are even againſt their wills compelled to deſiſt. But this heat, although indeed in the action of the growing, Minerals doth uſually excite and make great enough; yet for the greateſt part it derives its Original from the central fire, and this central from the Starrs. But after what manner and reaſon the ſtarrs beget the central fire, and this generates the Minerals and Metals, I will demonſtrate to the unknowing as briefly as I can.

Thus therefore ſtands the caſe: We read in *Moſes*, in the firſt of *Geneſis*, that God, when he made the World out of the confuſed *Chaos*, did give the Elements their original firſt, and aſſigned to Earth its proper place, and injoyned on earth its Office to be done; but by what means they are preſerved by the interceding perpetual Circulation, natural Philoſophy doth demonſtrate. It will not therefore be to our purpoſe to treat prolixly of them, but only of the riſe and nativity of metals, will I compendiouſly ſpeak as far as I know of them, *viz.* in what manner the metallick kind draws its original from them, together with its encreaſe and augmentation, and how having arrived to the top of their perfection, they come to their end.

I have a little before demonſtrated, that the ſuperiour element of fire, as the Sun, Moon, and the other Starrs, ſend down their inviſible vertues and fiery beams into the earths center, where they are congregated, and cauſe huge heat, and being not permitted there to reſt, leap back again, and are ſcattered throughout the univerſal Globe, and impregnate it with various and wonderful Creſcentials, which are called Minerals by the Philoſophers, cheriſhing and perfecting them in various forms. The reaſon and manner of which thing I will here in a few words unfold.

Every ſpiritual thing, come it from whatſoever body it will, is inviſible and impalpable, nor can any thing be made of it alone, but it's forced to remain a ſpirit, until it meets with a ſubject whereto it may adhere, be united, and by the benefit thereof be turned into a Corporeal Nature, and pure, anſwerable to the purity of the ſubject and ſpirit, the ſpirit is in the room of ſeed; but the ſubject anſwers to the earth or matrix in which the ſpirit is concocted, into a ſenſible body ſuitable to its own nature. But 'tis to be known, that the manner of Metallick conception and generation, is far different from that of the Vegetable and Animals: For in moſt Vegetables that have arrived to their perfection, nature works out a ſeed for a farther propagation and encreaſe, being the moſt excellent part of the herb, which at the Springs Entrance being committed to convenient earth, produceth a new plant in all points like unto the former, from whence it ſprang, by which doing new ſeeds of the ſame plant, are always conſerved. Although indeed ſome plants are not propagated by the ſeed, but by the root. Yet they are very few, and in ſuch, the root it ſelf ſerves inſtead of ſeed. And that in ſome places Plants grow out of the earth, without the aſſiſtance of either ſeed or root, its done by the help of the Elements, in whom the ſame force of impregnating the void earth and production of Plants, is at this Inſtant, as was at firſt, when they generated and brought them forth in the beginning of the World. In like manner is there a twofold production of Animals,

the one done by a proper ſperm, by which they are propagated, the other is a production of ſome little Animals, upon the world's ſtage, even without Sperm, by putrefaction only, and the mutual action and paſſion of the Elements.

Theſe two waies have footing alſo in Minerals, the one is the Univerſal impregnation made by the Starrs in the beginning of the world, the other is Daily. And even as the firſt generation of Vegetables and Animals is to be accounted far more excellent than that which is accidental and quotidian, ſo is it with Minerals likewiſe. As ſome Vegetables arrive to their perfection, and periſh ſooner than other ſome, ſo do metals and minerals alſo; and by how much the ſooner and quicker growth they have, by ſo much the ſooner do they periſh; and ſo on the contrary. And as a rational and movable Animal is a thouſand times in his nobility and fixity beyond a Vegetable, ſo alſo doth a Mineral, by reaſon of his fixity, far tranſcend any Animal; which wants an immortal ſoul.

Now when the Vegetables, Animals and Minerals, fatally terminating their period, are corrupted, and return into a nothing, each Element takes to it ſelf what is its own. The Starrs, the Spirit, the Earth, keeps the body which it formerly gave, and the Principles of the thing do each return unto their Fountains from whence they at firſt did flow.

And in this manner is there perpetual Death and Regeneration of things, by the teſtimony of Experience.

There are many ways by which Metals are brought to light, *viz.* by huge Fires: if by Accident and Careleſneſs of Shepherds, a Wood catcheth fire, the Earth by reaſon of the intollerable heat Gapes, and the molten Metal flows forth and is detected: ſometimes alſo vehement Earthquakes diſcover them.

Beſides, the Veins of Metals are found out when deep Wells and Pits are digged, or by the Plowing in the Fields, they are ſometimes dig'd up, and their Veins diſcovered: ſtrong Rivers waſhing away the Earth and Sand, do ſometimes open their Veins; the Fruits of which being found in the Banks, give cauſe of ſearching after them.

They are alſo diſcovered by means of an Animal, even an Horſe, by pawing with his foot, beating away the Earth uncovers the Vein, which happen'd at *Goſlaria* in *Ramelsbug*; even Hogs ſearching after Acorns, have diged up Mine-pits; or a pure Metal lifts up it ſelf into the Aire in the likeneſs of a Reed, by which means the exceeding rich Mines of Silver at *Kuttenberg* in *Bohemia*, was by a Monk manifeſted to the World, who walking in the Wood gathered a Silver Reed growing out of the Earth, and put it in his Cowle, and declared the thing in the Convent.

Sometimes alſo moſt vehement ſtorms pulling up very great Trees by the roots do open veins. Moſt frequently a Corruſcation gives undoubted teſtimony of Veins, which being enkindled by the warm air, runs a long ſome ſpace, in the likeneſs of a blew flame; nor is the finding out of the proceſs of Veins (not lying over-deep buried) very difficult if you rightly conſider, for they continually breath forth a warm Sulphureous vapour, upon which, not only the Graſs growing is thiner than is elſwhere wont to be, but even the Trees that grow upon them are dwarf-like, have paler and thiner Leaves than other Trees elſewhere planted have.

Likewiſe where the Dew, Hoar-Froſt, ſooner melts and vaniſheth, 'tis a teſtimony that a Metal is thereunder; the cauſe of which melting, is the warm vapours aſcending from the Veins.

But that teſtimony which the moſt imploy themſelves in, in ſeeking by an Hazel rod (which my ſelf have many times experienced) is fallacious and uncertain.

This is the Work of the Art, if any one conjoyning Metals in the Fire under a certain conſtellation, melt them into an electrum and make of them a little Ball, perfortated in the middle, wherein a wand of hazel of one years growth wanting little boughs, is to be implanted, which carry ſtreight out before thee where thou conjectureſt Metals to be, when the little Ball, bows the Rod & bends towards the ground it is without doubt that thereunder are metals, & that the labour undertaken about them will not be in vain.

This teſtimony proceeding from the Natural and infallible foundation of Philoſophie, is deſervedly to be preferred before all other Arts concerning the finding out of Metals.

Nor mayeſt thou wonder thereat, for we are unacquainted with moſt things; who is it that can certainly unfold why the Magnet atracts Iron, and heated Amber attracts Straw, Graſs, Thread and other Vegetables? the whole Earth is full of unſearchable Wonders and Secrets of GOD which are to be diligently obſerved by us.

Now as to the cauſes, why ſo many kinds of Metals are generated ſo unlike amongſt themſelves; ſome think one thing, and ſome another; many will that the Seven Metals onely have their product from the Seven Planets, *viz.* Lead from *Saturn*, Tin from *Jupitur*, Iron from ♂. Gold from the *Sun*, Copper from ♀. Quick-ſilver from ☿. and Silver from the *Moon*; but I am not of that Opinion; for how can the Sun, ☉, or any other Planet ſeek out to it ſelf in the profundity of the Earth, a peculiar place where to ſow its Seed, and procreate a Metal conformable to it ſelf; whereas we ſee that no Metal is digg'd out of the earth, alone, but alwayes mixt with others; for thou ſhalt never find Lead but there is ſilver in it, more or leſs; no Tin is dig'd or waſhed out but it hath Gold and Silver; all Copper and ♂ contains Silver, and ſometimes much ☉ which is neither conceived of, or believed by the Metallurgiſts, nor is ever Gold found without Silver or Copper, and ☽ is very ſeldom void of ☉ or other Metals; but if each Planet ſhould generate its own Metal, how comes it that another is adjoyned to it? I ſpeak of thoſe Metals only, which are either ſolely contained in their own Veins, or elſe are found and waſht out in grains in the Earth or Sand, either pure or mixt with ſtones.

I exclude thoſe which are (two or three mixt with each other) each in his own proper Vein, and are a burden or impediment, to one another, as Metalliſts ſpeak, and are often carried along a great while together, and not ſeldome do come together making one Vein, and are by and by ſeparated and diſperſed into various little Veins; and now, if each Planet ſhould create his own proper Metals verily he would alſo chuſe his own place, and would not ſuffer anotherto poſſeſs his proper neſt, and diſturb his operation.

But let us allow to each his proper Metal, and then what Starr ſhould we aſſigne to Biſmuth Cobolt, ♉ and Zink for their Generator, they being undeſervedly excluded from the Metalline Company, wherewith they are nearer affined then ☿, being fuſible with other Metals, and brought to uſe by the Artificers hand, which with ☿ Cannot be done; indeed

deed ſome are to be found alone, in Veins, as Lead and Silver, but ☉ being any where found and cleanſed from every Mineral, and waſhed out of the Sand, yet never wants Silver and Copper; Tin and iron are alſo gotten out of the Sand, and Earth in ſmall pieces, never ſimple, but mixt with ſtone; theſe grains or pieces yield the moſt Excellent Tin, (Called by the *Germans* Seiffenzin) and for the moſt part contains more Gold than that which is digged out of the pit, Becauſe while thoſe litle granulated ſtones are waſhed out (Switter or Sintranpen) many granulated ones containing much Gold, commix themſelves therewith, and are excocted and melted together with the Tin; in like manner the little grains of Iron yield the moſt Excellent Iron. The Miners find ☿ either runing or incloſed in a Red ſtone but to be excocted and vivified by Art; ſometimes alſo Copper is found in very little ſtones (Retauplein) like the Angulated Piris Stones; otherwiſe all Metals grow in their own Mines or Veins of the Mountains, out from whence being gotten with greateſt labour and coſt, together with hazzard of life, are purged from the Mine, by beating, waſhing, and melting; but how each are to be known, exploded, digged, beaten, waſhed, melted, and ſeparated from heterogeneous things, is copiouſly demonſtrated by the moſt Famous and Antient Metalliſts, *George Agricola* and *Lazarus Erker*.

I do therefore conclude that Metals, and Semimetals or Minerals, have their birth from one common Seed, but are by accident ſevered into various forms and ſhapes.

For the Vertues of the Stars being jointly carried into the Centre of the Earth, do not remain alone, but being mixt each with the other, goe back into the Caverns of the Mountains, ſeeking a place of Reſt, where they may make themſelves a Body; which if it be pure, makes alſo a pure Metal, if impure, an unpure Metal; and ſuch place is moſt like unto a Matrix, conceiving Seed from the Male, which if it forms into a body, cheriſheth, and being excocted to maturity, perfects it. Now the Aſtral Spirits ſupply the room of man-like ſperm, which being received into the moiſt Earth, in Caverns, as in a Matrix, is nouriſhed, and faſhioned into diverſe metallick Forms, and palpable Bodies, according to the purity of the place.

Hence alſo 'tis evident, That various kinds of Metals are generated out of one Seed accidentally, becauſe the Metals, whilſt in being, do grow riper by little and little, and are more and more meliorated, and daily experience doth demonſtrate, that they are nobilitated, not only under the Earth, but even above it. Hence 'tis, that the Miners digging out an immature Mineral, as *Biſmuth*, *Cobaltum*, or *Zinck* examining it, as they do ſilver, and finding nothing, ſay, that they came ſooner there than they ought, which Minerals being expoſed to the Aire, and then exploded, and tryed after ſome years, are found to contain much ſilver.

On this account I affirm, That if the common Seed of Metals, had alwaies a clean, and fitting Matrix, and no accidental impediments intervened, nothing elſe but Gold (the higheſt perfection of metals) would be generated; and that this is Natures intention, alwaies to bring to perfection, what ſhe hath begun: but Gold only attains this ſtate, all the reſt remaining imperfect; but it ſhall be clearly demonſtrated in the Third Part enſuing, that by genuine Alchumy, even they may be advanced to the ſame degree, which if it could not be demonſtrated, that imperfect Metals might by Art, be brought unto perfection, and by Induſtry, and the Fire; it might be very probable and credible, that each Metal had his own appropriated Seed and Planet.

But now, if common lead poſſeſſing but little ſilver, by the uſual trying of the Cupel, may, by the benefit of maturating Salts, be ſo far perfected by a ſhort digeſtion, as to yield much ſilver; and by a longer digeſtion or fixation, to yield, even Gold it ſelf, which it had not in it before [*Conſ. Part* 3*d.*] 'tis evidently perceptible, that 'twas not Nature's intent, that Saturn ſhould ſo remain in his Saturnine Eſtate, but that he ſhould be made Silver and Gold.

The other imperfect bodies may alſo be maturated by digeſtion, that they ſhall yield forth fixt Gold and Silver.

In like manner the ſpurious Metals or Minerals, as ♉ *Cobolt*, *Zinck*, *Biſmuth*, and others of that kind may be ſo fixed, as to be behind them, in the Cupel, good Gold and Silver, which is moſt plainly done in the Third Part.

Thus thou ſeeſt, That 'tis not Natures Fault, that there is ſo many imperfect Metals; but 'tis to be imputed to external Impediments; for if that Gold lay not hid in the Potentia in the imperfect Metals, by what Art could it be reduced into action?

Art cannot create either Gold or Silver, but Nature can, and yet doth not alwaies accompliſh it upon the Earth without the induſtry of Art: When a Gardner ſuffers the ſeed and root of the Plant to wither, nor commits it to the Earth, that it might be perfected; 'tis not the fault of the ſeed, but the Gardner, who ſuffers it, that it comes thus to periſh. Nature doth very often want help, as appears in the fruits of Animals, and Vegetables; and why may not help be neceſſary and profitable in metalline products, where, by the Artificers ingenuity, they may be holpen. 'Tis evident then, that Nature aims, as well to make Gold out of Minerals, and baſer Metals, as to make a Man of an Infant; or a Tree of a Nut: and if it be otherwiſe, it is not to be imputed unto her, but to external Accidents.

Now I ſuppoſe that I have ſufficiently proved by theſe things, that all Metals proceed out of one ſeed and root; and may be reduced thereinto, and alſo, that Minerals may be compared unto the firſt buding of Vegetables, imperfect Metals to Semiadult, or half ripe Plants; but Gold to perfect ſeed or fruit, brought by Nature unto its end or bound.

But this is to be underſtood of the Univerſal Birth, and Generation of Metals; which for the greater part, drawing their Original in the profundity of the Earth out of the Central ſeed, do grow in Caverns and Veins, and increaſe together into various forms, and are from theſe digged out with great coſts, hazards, and labour.

Now there's another Generation actuated in a plainly-diverſe manner, without the Central common, and propagated ſeed, done upon the Earths ſuperficies, by the Operation of the Stars above; yet 'tis the leaſt part of Metals, that are thus generated. It hath been ſaid, that there is a twofold manner of Generation, nature makes uſe

of in Animals and Vegetables, and ſo its in Metals.

The Firſt is moſt frequent and notable, the other is rare and inſenſible: The one is done in Plants, by the preparation of the ſeed or root; the other ſtrongly perfected by the influence of the Stars, and the Elements efficacy and power: for Example, If Rain-water, being received into ſome Veſſel, exhales in the heat of the Sun, or of the Aire, an Earth remains, which by an innate power, produceth various little Plants, little Animals, ſmall Worms and Flies, without the acceſs of ſeed.

The ſame happens in Metals, when the Sun, or any other Star operates upon the moiſt Earth; the aſtral Vertues are congregated, and being made corporeal, do exhibit diverſe Minerals and Metals, according to the purity of the Matrix, or moiſt Earth; where the Water is inſtead of the Matrix, and the Stars inſtead of the Father, or Seed: likewiſe, it is not poſſible for Metals to be generated in the Centre, where all things are dry, but far off from that place, where the Waters moiſten the Earth, and with which the Central Spirits can join themſelves, and paſs into Bodies and Metals.

For a dry ſpirit cannot coagulate himſelf into a body, by reaſon of his dryneſs, but wants a fit ſubject, from whence to take its body, which is Water: as ſoon as ever the ſulphureous ſpirit is mixt with the water, it is no more common water, but the rudiment and beginning of a metallick generation called ☿ by the Philoſophers, not the vulgar being already made metalline, but a viſcous water, which the metallurgiſts call Gur or a fermenting ſpume, which if contained in a convenient place, and Cheriſhed with the due Central heat, and an humidity, is in length of time maturated into a metal.

The Conception therefore, and generation of metals is not only in the profundity of the earth by the mediation of the central ſpirits carryed upwards, but alſo in the ſuperfices by the ſtars caſting their inviſible beams into a ſubtle, and fat earth where they are held, and become Corporeal.

For the ſidereal fire never ceaſeth to infuſe its virtues into the earth, and to Impregnate it with various products of vegetables, animals, and minerals, according as it meets with a matrix, nor is this done only in the earth as being moſt fit for metallick generation, but even in the air in thick Clouds, do they act the ſame thing.

Truly we frequently ſee that not only little Animals, as Palmer-worms, Caterpillars, Frogs & other inſects are there conceived and thence excluded, and deſcend mixt with the rain, but tis alſo evident by Credible Teſtimonys, that ſtones of an hundred weight, alſo Maſſes of Iron in the form of ſmall Conglomerated drops, exceedingly malleable have fallen down from the air, and alſo various Comets and other Igneous ſubſtances being gathered together in the air: are kindled; their matter being taken away they dy, and falling down upon the earth like a fume of Arſnick they infect it with their brats, whence an harveſt of many deadly diſeaſes doth moſt plentifully bud forth. Nay even thunder and lightning it ſelf is nothing elſe, but a ſubtle nitre enkindled, and with the Crack falling ſtones are procreated in the air; thence it appears, that not only the central fire doth ingravidate the Intrals of the earth: but alſo the Aſtral fire ſeeks a place of creating metals in the ſuperficies or in the air it ſelf, but no where more apt then in the veins and dens of the earth.

I well know, that there are many Opinions of thoſe metals, which are not in the bowels of the earth; but are found above either in the earth, or ſand in little grains, but they are for the moſt part Erroneous. Moſt men do think that gold which is found on the banks of Rivers and there waſhed out, was not generated in that place, but were broken off from ſome veins of gold by the ſtrength of waters, falls, or floods, and brought thither out of the mountains, which indeed may be true, for ſomtimes torrents do hurry alongſt them little ſhining golden grains which are afterwards taken up on the hairy backs of the beaſts, but that all gold found in Rivers, and ſtreams, is by the help of currents waſht out of the mountains, ſeems unlikely, but was rather generated there; for ſometimes gold is gathered by a river from whence the fountains are exceedingly remote and diſtant, which ſhould bring it thither.

Likewiſe in open Mountains, never ſeen by any fountains, is gold gathered out of the earth or ſand, of which kind is almoſt all the gold, which the Hollanders buy of the Indians of the value of an hundred or thouſand markes, which is not gotten out of the fountains or rivers, but for the greateſt part out of the ſand in open places, Elevated from the waters.

Such ſublime and dry places have been in Germany, alſo where the auriferous earth was carryed down to the rivers, and ſeparated from the gold, and even to this day where little grains of Zwitter or Tin are waſhed out, are grains of gold alſo found, not in low deep places, but ſcattered about the mountains and are uſually melted with the Tin, whence tis that ſuch Tin is generally wont to abound with gold, which thing I have frequently found experimentally.

The cauſe why gold is oftner found near rivers and ſtreams is this, becauſe that being carryed on with force they waſh away the ſand, being lighter and leave behind them, the more heavy grains of gold, from which the remaining ſand is waſhed away with leſs ado; but now the Rheniſh gold, ſuch as here is in Germany, and the like, is not pure, but mingled with ſilver and copper; nor is it always alone, or fine, like a metal, but in the form of an heavy and ſulphureous powder, whoſe combuſtible ſulphur being burnt and removed by fuſion, it acquires a golden colour tenderneſs, ductibility and purity.

But that which is brought from India, is, as to appearance gold, and is ſome greater, ſome ſmaller graines, and not as that with us is, yet not fine, but ſome is found better than other ſome.

I ſometime ſaw a dutch Merchant having a lump of this kind of gold well nigh fine or of Twenty four Carracts weighing ſome Lotons, but generally they are of the bigneſs of a midling ſand. But that which is waſht out in Hungaria, and Tranſilvania is eſteemed the fineſt of all, which I have found equivalent to duckets.

Now I ſuppoſe that I have ſufficiently demonſtrated, that all gold is not generated by the central fire in the belly of the earth, but alſo in the ſuperfices thereof, by the vertue of the ſuperiour ſtars, and not only gold, but other metals and minerals, eſpecially ♂ and ♀ are in like manner generated, and ♂ moſt frequently, which is plentifully found every where in round or angulated little ſtones, for the moſt part of a golden Nature, and though commonly neglected yet deſerve well to be obſerved.

Such

Such alſo are thoſe flints which are within of a reddiſh colour conteining a golden iron, for there is a great familiarity and friendſhip between ♂ and ☉, where under lys hid, a great ſecret and in the third part ſhall be explained more at large.

Now for a further conviction of ſuch as are incredulous, the metals are generated upwards or here above in a moiſt earth without the central ſeed, this example is conducible in marſhy parts, and places that are always moiſt, the Superiour Stars have a fit Subject to generate Metals in, witneſs Holland, where they yearly dig a peculiar turf or earth, which they burn inſtead of wood, which contains, beſides ſulphur, Arſnick, ♂ and ☿ yet, all, is not thus, but only that which is dig'd out of the moſt deep places, and is called baccrt, the reſt called been ſeldom contains any thing other thing than, ſulphur & a little Arſnick, whereas the other hath very much, ſulphur and Arſnick being an unwholeſome fire to ſuch as are not there unto accuſtomed, which although it be in depth Twenty Thirty or Forty feet, yet do they ſcarce extract or dig out five or ſix, or at the utmoſt ten foot, becauſe in ſome depth it wants ſulphur altogether, and is unfit for the fire.

Now then ſuch as try for bituminous Turf, or ſuch as ſearch for the depth of a Marſh, or ſeek after a ſandy bottom, drawing forth the earth with long borryers or Caugers) do find that by how much the deeper they go, ſo much the leſs, ſulphur they find, and at the bottom none at all.

Whence tis evident that ſulphur Arſnick, or that Mineral that lys hid in the earth received his Original from above, and not from beneath. But the moſt Metals are produced in the earths bowels, and the feweſt nigh the Circumference, whoſe ſeed is found more powerful in the deep, than in the Circumference; for the ſidereal virtues do conſtantly haſten to the centre, and not finding further paſſage ſight together, and ſtrive each againſt the other, and cauſe a huge heat, by the repercuſſion whereof the whole globe grows warm, and is gravidated with all kinds of Minerals.

Thus then are all Minerals, and Metals procreated, as well in the deep as in the Circumference, out of a moſt ſubtle Aſtral ſeed, with a ſutable moiſture wherein it frameth a body to it ſelf, nor let any wonder that Metals are generated of an inſenſible, and moſt ſubtle warm vapour, if joyned with humidity, they fall not down from heaven as a ſtone from an houſe, but deſcend ſpiritual, and getting a fitting place in the earth do (by the waters mediation) put on a body, and get their weightineſs from the earth, even as the ſeeds of vegetables and Animals, which (as is moſt evident) give only the form, increaſe and life, but ſupplys not the place of the body it ſelf.

But moſt falſe is the foundation of ſuch as imagine, that Metals have there Original from common running, ☿ and burning ſulphur (each being a ſemi-mettal) tis indeed certain that metals are born of ☿ & ſulphur but not the common, but ſuch aforementioned, *viz.* Aſtral, a ſulphureous warm, dry, and ſpiritual ſoul, and terreſtrial viſcous water, from whoſe mutual conjunction (as of Male and Female Seed) all Metals are born.

That Erroneous Opinion hath been the cauſe of many labours on, ☿ and they are not a few, who have waſted all they had by this, their Philoſophy. And how many have attempted to fix common, ☿ either with or without Gold or Silver, and do at this day attempt the like, with hopes of turning it into Gold or Silver, but all in vain, my ſelf have to my loſs tryed it, and how far I have come, the third part ſhall declare.

In like ſort as great a number have attempted to extract runing, ☿ out of Metals, intending to fix it (as the firſt of Metals) into Gold or Silver, but all in vain, for as the beginning was fooliſh, ſo the end terminates in loſs; and ſuch have chiefly with much trouble ſought after the ☿ of ♄ or Antimony being perhaps ſeduced by the ſayings of the Philoſophers, who affirm that ♄ the father of all Metals reduced into ☿ may be eaſily Changed into Gold, but this is not that running ☿ but a viſcous water, that may be handled like the firſt being of Metals, according as the Artificer willeth, and may be changed into any form. I cannot tell what madneſs poſſeſſeth men that aim to reduce ♄ or ♁ into running ☿ in hopes of a more eaſy fixing it, whereas neither of both ever was running ☿ and in my opinion will never be, but grant it may be made ☿ to what will it be more profitable then ♄ it ſelf, it being hereby made more volatile, and not more fixt, but ſay they ☿ is a purer ſubſtance then ♄ and will therefore the more freely be amalgamated and fixed with the Sun and ☽ no, by no means. Well! I will grant that ☿ may be made of ♄ or ♁ which yet I can hardly believe, what will it profit thee? Nothing at all; but now I readily believe, and have experienced that ♄ and ♁ being after a Philoſophical manner reduced into ☿ that is, into a viſcous water, is moſt eaſily joyned with the ☉ and ☽ and is to be fixed even without them, but twas never ſeen that, the putatitious ☿ of ♄ did ever accompliſh any praiſe worthy thing in the Meliorations of Metals. I grant that running ☿ may eaſily be made out of any Metal by the addition of vulgar ☿ and I have tryed it, but what profit comes therefrom; enquire of thoſe that have to their loſs practiſed thereabouts.

If running ☿ were the principle of metals, ſome ſmal portion thereof would verily be found in all mines of metals, or in moſt of them, but becauſe it is not there found it neceſſarily follows, that ſuch opinion is to be accounted a vain fiction.

Now all Philoſophers do unanimouſly teſtify that nature forms the firſt rudiments of metals, out of the Aſtrall Spirit, and terreſtrial water, by affirming that every thing may by art be reduced into that, out of which it was at firſt made.

And whereas metals may be reduced into a viſcous water without any corroſive, and this by a due heat and digeſtion tranſmuted into more pure, and better metallick forms, tis undoubtedly credible that they proceed from hence, and not only metals, but alſo many ſtones, and mineral things, either conteining metals, or void of them, found upon the earth, and under it, have their firſt beginnings after the like manner, my ſelf having ſeen ſome mine-diggers, in ſandy mountains diging for other things, who have accidentally chanced upon this *Gur* or Kur, thinking it to be a Lump of Fat, one of them carryed it home, and anointed his ſhooes therewith, but the next morning he found them over laid with a ſtony cruſt, and the lump or maſs it ſelf converted into an hard ſtone, but I am not ignorant that ſtones are otherwiſe generated, the reaſon how, pertains not hereunto.

A metal being reduced into its firſt matter like to Kur, is in the Artificers hand to induce into it, what form he liſts, nor can it indeed be ever meliorated

unleſs it be firſt reduced to its *prima materia*. In a ſolid metal, it cannot be perceived of what parts it is compounded, but being reſolved, it's parts are diſcovered, and it being by extraction deprived of its proper Soul, wherein its life and whole dignity lodgeth it is no more a metal, but reſembles an unſhapen brittle earth, without metallick Liquability, and its whole goodneſs conſiſts in a very little quantity of ſoul, and ſtarry maſculine ſeed, the remaining body being a dead and vile earth.

Finally, even this (which I have mentioned in my treatiſe of Potable Gold) ſufficiently confirms that metals are alſo created upon the earth, becauſe, that not only the ſolar beams being collected in various ſubjects become corporeal, but even the heat of our uſual fires doth likewiſe do the ſame thing which the tryals of the Cupels abundantly teſtifies, let the Reader ſearch and view the place. Nitre and other ſalts are evidently produced by the ſun, in a moiſt earth, which thing will never be effected in a dry. And the Philoſophers making mention of the melioration of metals, have always minded inceration, as exceeding neceſſary to their intention.

In this work, moiſture is the patient, and heat ſupplys the place of an Agent; this is diſcernable in Vegetables, Animals and Minerals, there being nothing that can attain perfection, without due moiſtening or endure the action of a maturating heat.

And by how much the thicker and fatter the water is, by ſo much the fitter for a matrix, and therein ſeed will more greedily and ſpeedily ſtick and germinate.

But by how much the thinner, it is by ſo much the more fit it is to be accounted for the ſeeds vegetation.

Water of it ſelf cannot be made a metal, unleſs it be firſt impregnated with ſeed by the ſtars, and gifted with a Vegetating life; which ſeed is the original, the ſoul, and life of all metals; and how much the more of ſuch ſeed they have, ſo much the better and more fixt they neceſſarily are.

On this account I firmly adhere to this Opinion, That metals receive their Soul, Spirit, and Life from the Starrs, as from an univerſal ſeed, and their Body from the Water as an univerſal mother, and derive the diverſity of Bodys, and degrees of Goodneſs according to the Scituation, purity or impediments thereof, and are digged out by men (for whoſe ſake (as the nobleſt Creature) all things are made) with great greedineſs, coſts, and hazards from the Bowels of the great Animal, and are prepared and elaborated for their many-fold Uſes.

Let thus much ſuffice as to the generation of Metals; but now by what means they arrive to the utmoſt end of perfection and Dye, and are hindred in their growth, we will not paſs over in ſilence.

Thus therefore the Caſe Stands, There is a certain time prefixt to all Creatures, how far they may come or protract their life, which predeſtinated time if it be cut off, and attaines not unto its ſcope or end, it comes by accident and may not be imputed unto Nature, and this is done ſundry wayes according to the various tempers of ſuch enemies as they meet withal, ſome are hurt by the cold Air, prohibiting their growth, as is evident in Metals digged from their mines or trunks and expoſed to the air, then ceaſing to grow, and were they ripe or unripe Metals, ſo remaining, but if they get a new matrix, then as the ſeed of a plant on the Earth, they begin again to grow and haſten towards perfection. To ſome, as to Vegetables and Animals; the aire is the life, of which being robbed, they expire and Dye. The air deſtroys Fiſh, the water is their life, but the death and deſtruction of two-footed and four-footed Animals.

Even as all the elements have their proper offſpring which they cheriſh, ſo are they the deſtroyers of other things, which the riſe and death of Metals clearly teacheth.

For as ſoon as ever (being conceived in the earth) they begin to grow, they become partakers of a certain ſaltiſh Nature, as their matrix, in which, and by which, they are afterwards perfected, wherein as long as they remain uninterrupted, they go forward, and are bettered in quality and quantity, but as ſoon as ever their contrary, as Aire or common Water meets with them, they are ſtopt from proceeding further in the matrix and Dye.

They being (becauſe of this moſt ſubtle ſalt) while in being, moſt impatient of both *viz.* Water and Aire.

Now if the aire invades them, their life, conſiſting in a Volatile ſalt, is elevated and drawn back by the Stars: If water breaks in, they diſſolve and are waſhed away, the matrix being deſtroyed by its contrary Element, whence 'tis that ſuch Metals in their *primum Ens*, lying Embryon like, and obnoxious even to the ſmalleſt corruption, do periſh, and never attain to the appointed perfection by reaſon of ſuch deſtructive accidents and injuries, whoſe tender ſalt is gon into ſulphur, and is no more ſubject to the corruption of either Water or Aire. As for thoſe that are Mature and perfect, if they are not cut off from their ſtock being extracted out of the Earth, from which they have no more nutriment, their ſulphurious covering being laid aſide, the defence and ſafegard of their Nature being baniſhed, they rightly reſemble a decrepid Old man, whoſe Radical moiſture is dryed up and are diſſolved and eaten up by the ſame Aſtral Salt, or Vehement Corruſcation, from whence they did ſpring, and thus are reduced unto Nothing; amongſt which, *viz.* metals, as well as amongſt Vegetables and Animals, Nature obſerves a perpetual Circulation of Life and Death.

It ſometimes happens that the diggers finding a metal excavated by the Aſtral ſalt, like to the Hony Comb by the Bees, are accuſtomed to ſay, that they came thither too late, whence it is concluded that the ſame corruſcation is the begining and end of metals.

Tis of ſmall moment to know who firſt digged up metals applying them to uſe; *Adam* was the firſt to whom GOD revealed the Art, becauſe he could not want it,

It ſeemeth certain, that that whichwas by his ſucceſſors diſcovered to *Noah*, and from him propagated unto us will undoubtedly be conſerved unto the Worlds end, becauſe of its great neceſſity and benefit.

But as this Art is profitable and uſeful, and noble, ſo it is chargable, coſtly, and dangerous, and alſo uncertain of getting gain, but yet not to be neglected on that account, it being an honeſt thing, and pleaſing to GOD, and managed heretofore by many Prophets and Kings, and now at length, diſervedly had in great eſtimation by us Chriſtians, becauſe of its neceſſity.

He

He may well boaſt of earthly felicity, to whom GOD ſhall vouchſafe to give ſuch a Light, of ſeeing by what Artifice Nature is to be holpen, and that which is ſuperfluous and adhering to vile and abject metals every where, may be removed, and the defect ſupplied; ſuch an one hath in very deed a rich and durable Mine; neither are Ghoſts, Inundations of Waters, evil Tempeſts, unwholſome Vapours, and other inconveniences, that hinder from a purpoſed intention, to be feared. But verily man, by reaſon of the continued wickedneſs of his Life, being made uncapable of this high Art and Science, is compelled to get out Metals from the Earths bowels, in the ſweat of his brows, and to paſs over his life in cares and labours.

And thus I conclude this Tract concerning the generation of Metals, and refer the Reader, deſiring things more at large, to the Third Part, wherein is accurately taught of what property Metals are, how to be diſtinguiſhed each from the other, opened without corroſives, reduced into their firſt matter, and how by the benefit of art and fire, new and better Metals are to be generated out of that firſt matter.

Likewiſe, how they are to be examined by a far better way and manner than uſual; how to be purged and ſeparated each from the other, and alſo unfolding (as far as is permitted) a little Book of the moſt expert Philoſopher *Paracelſus*, or his Book of *The Vexation of Alchymiſts*, whereby the honour due unto him (though much obſcured by evil ſlanderers) may be again reſtored unto him, and the whole world may know that he was moſt expert in natural things, and wrote very faithfully, and left unto us a large light, though obſerved by a very few, for the encreaſing and propagating whereof, and defending it againſt the haters of the Light, I will enter upon the Third Part, for my Neighbour's good, for the accompliſhment whereof I pray GOD, the Creator of all things, and the Patron of Truth, mercifully to vouchſafe his aſſiſtance. *Amen.*

FINIS.

THE

THIRD PART

OF THE

Mineral Work.

Wherein under the Title of a Commentary on a little Book of Paracelſus, *called,* The Heaven of Philoſophers, or a Book of Vexations, *the Tranſmutation of Metals are Taught in general; with an Appendix demonſtrating their particular Proceſs, Melting, Exploration, Separation, and other neceſſary Operations.*

A Preface to the Reader.

Courteous Reader,

I Will not conceal from thee the reaſon why I have taken upon me in this Third Part to explain a Book of Paracelſus, *called* The heaven of Philoſophers, *leſt thou ſhould'ſt believe I wanted matter to write, did I not encreaſe my Book by the Writings of other men. That Good which I have here decreed to write, I could have done even without the admixtion of* Paracelſus's *Books, but this properly is the cauſe, becauſe* Paracelſus *in our precedent Age, publiſhed very many moſt elegant Books for the Publick Good, but obſcure enough, and for this reaſon are by the unskilful accounted falſe, and are contemned; but yet becauſe they are ſtored with* Arcana's *or Secrets, they are moſt highly to be eſteemed. Now, after that I had perceived the ſaid Books to be true, I did very impatiently bear ſuch ſiniſter reports of this man, as blazed him abroad for one Ignorant of all things, and a Vagabond; who in very deed had but a few Equals in true Genuine* Philoſophy, Medicine, *and* Alchymy.

He did many good turns to all, eſpecially to the Poor, of which many Teſtimonies are extant; and amongſt others, that Epitaph is to be ſeen, which is in the Hoſpital of St. Sebaſtian *at* Saltsburg, *where he was buried, and to which he bequeathed his Goods, and is graven in Capital Letters in a Marble, and erected in the Wall, the Tenour whereof I my ſelf have read, and is thus:* Here lies buried *Philippus Aureolus Paracelſus,* a famous Doctor of Medicine, who by a wonderful Art cured thoſe direful Diſeaſes, the Leproſy, Gout, Dropſy, and other incurable Contagions of the Body, and to his honour gave and bequeathed his Goods unto the Poor. He died in the year of our Lord, 1541. the 24th. of *September.*

And what haſt thou now to ſay? Had he not been ſuch a one as is mentioned in the Epitaph, the Magiſtrate would not have honoured him with ſo eminent an Encomium. Moreover, all prudent Lovers of Truth do to this day believe, that he never had his equal: And although through the Envy of ſome unlearned men he is deſpiſed, yet it derogates nothing from him, for he will ſtill remain Paracelſus.

And now, ſeeing that our Paracelſus *hath hitherto undergone ſuch bitter things, and that none have dared to open their mouths againſt thoſe ſlanderers, I will attempt the explication and illuſtration of his chiefeſt Books, and prove that he was not either a Lyer or Impoſtor, but moſt experienced in the light of Nature; and to this end will I begin with his* Heaven of Philoſophers: *I will not avow, that he could make heaps of Gold and Silver, (himſelf mentioning not any ſuch thing, but he only diſcovers the poſſibility of the thing, which even I alſo will endeavour to declare, although I am ignorant of doing it in great quantities, which thing I am not greedy after) yet 'tis my contentation to be capable of diſcovering truth from falſhood, and convince ſuch as are incredulous, having ſome hopes, that by this my faithful writing, an occaſion will be adminiſtred unto others of ſearching after and obtaining their deſired end.* Amen.

The Heaven of the Philoſophers:

OR,

A Book of Vexations.

By **Philippus Theophraſtus Paracelſus.**

The Art and Nature of Alchymy, *and what is to be thought concerning it; being comprehended in Seven undoubted Rules, reſpecting the Seven vulgar Metals.*

The PREFACE. *Theophraſtus Paracelſus* to all Alchymiſts and Readers of this little Book.

BEloved and Expert of the Art of Alchymy, *and all ye who promiſe to your ſelves much Riches and Gains of much Gold and Silver, which thing* Alchymy *doth plentifully teach, and ye (who being occupied about theſe things) would be vexed, and cannot ceaſe until you have experienced what it gives, and what promiſes it performs; verily, daily Experience teacheth, that there is not one of a thouſand that becomes Maſter of his Deſire; which I will not call the fault of the Art or Nature, but the unskilfulneſs of the Artificer.*

Wherefore I will not ſtuff this little Book of Alchymy *with difficult Art and tedious Labours, as the common Alchymiſts are wont to do.*

℞ ☽ melt it with Nitre and Tartar, of this take one Lot, of Gold one Lot, of Tin three drams, of Schlich one dram, of Sulphur two Lots, of Vitriol two lots; let them flow with ☽ in a Crucible with Arſenick. *Becauſe alſo all the ſigns of Heaven, and the characters of the Stars and Planets, together with their changed and inverted terms and names, as alſo the Receptacles of the matter, and the Inſtruments of Artificers are uſually very well known; It will not be needful to treat of theſe things anew in this Book, although herein are uſed theſe ſigns, names, and characters, when it ſeems convenient and profitable.*

Now here is delivered another Reaſon of Alchymy, *in ſeven Rules, accommodated to the ſeven Metals, after an infallible manner, although in Expreſſions not adorned, but undreſſed and ſimple: Yet, as to the ſence, the expreſſions are abſtruſe and profound as can be; which may deſervedly be called the Miſtriſs and Summ of all* Alchymy; *from which even the myſteries of other things may be produced, divined, and known, with many new Speculations, from whence new Cogitations and wonderous Operations, do (by examining and trying) come forth to the Light, that in many places they are even, in the Examen or tryal it ſelf, found to contradict the Pleaſures of the Philoſophers.*

Likewiſe in this Art nothing is more certain, than that which is leaſt apprehended and believed; and this is the only fault and cauſe of all various Operations in Alchymy; *whence 'tis that many ſuffer loſs by their own unskilfulneſs, and ſo labour in vain, either becauſe there's more of the matter, or leſs, or equal weight, whence the thing is more corrupted in operation and deſtroyed; or if the thing is truly lighted on, it is become more exalted, and tends unto Perfection.*

For the way is moſt eaſie, but is found by but very few. It's alſo expedient, that an ingenious man conſider the Art and certain Rule of Alchymy, *whether he would make ſomething or nothing: he ought to make a nothing, that he may bring ſomething unto nothing, and that ſomething may be again generated out of nothing; which Saying is incredible, but yet moſt true;* Corruption makes a good thing perfect: *Yea, good cannot appear, becauſe of his covering and hider; good alſo is begun whilſt 'tis hidden; the hider ought to be removed and deſtroyed, then the good being freed, will manifeſtly appear in his luſtre, the* Gloſs: *the hider or covering is the Mountain, Sand, Earth, or Stone wherein the Metal was generated. Now every viſible metal is the obſcurer or hider of the other ſix metals.*

Becauſe therefore that by the Element of Fire Imperfect things are corrupted, burnt up, and ſublimed ſuch as the five metals, ♂, ♀, ♃, ☿, & ♄ *are; but the Perfect not at all,* viz. *the two moſt Noble, the* ☉ *and the* ☽, *therefore they ought to abide even in the fire, and to aſſume their body out of the other Imperfect metals, in which they are deſtroyed, and to appear viſibly; which thing,*

how

how it may be done, and what helps are thereto neceſſary, ſhall be taught in the ſeven Rules, viz. *What the nature and property of every metal is; what operation he hath, being mixt with others; and what he can do.*

'Tis alſo to be obſerved, that theſe ſeven Rules cannot forthwith be underſtood by one that is ſomewhat dull, at the firſt reading and view, a weak underſtanding cannot compaſs hard things. Hence every of theſe Rules wants much ſearch and travel. Some are pufft up and proud, ſuppoſing themſelves well to underſtand; and theſe things are childiſh, which are here delivered, and they know far better, and do plainly contemn theſe things of mine.

Glaub.] This Preface is of it ſelf perſpicuous, and needs not any ſingular Interpretation or Explication, but indeed the Proceſs which he mentions requires a more accurate Obſervation.

Take Antimony, melt it with Tartar and Nitre, of this take one lot; of Gold one Lot; of Tin three drams; of Schlich one dram; of Sulphur two lots; of Vitriol two lots: let them flow with Silver in a Crucible with Arſenick.

This is the Proceſs of making Gold and Silver, which *Paracelſus* will not have to be accounted like unto other Proceſſes, of much labour and long time, but is confident, that by the help hereof he can get Gold and Silver with little labour, time, and coſts.

'Tis not to be doubted, but that this hath been tryed by thouſands, and fruſtrated the hope of ſuch as laboured thereabouts; and that not without cauſe, they imagining that theſe are fooliſh ingredients to be taken for ſuch work; my ſelf have heard many of thoſe that have made trial, to be very much diſpleaſed: By what means can gold and ſilver be made by volatile and preying ravenous things, ſuch as ♁, Vitriol, Sulphur, & Arſenick are, which do not only yield from themſelves no Gold or Silver, but even corrupt them, and bring them to fume, or at the leaſt turn them to *Scoria*; my ſelf trying this when I had blown them altogether, I found that theſe metalline ſpecies, as Schlich, Vitriol, Sulphur, and Arſenick did, corrupt the Sun and Moon, ſpoiling of its metalline form, and tranſmuted it into *Scoria* or droſs. But now this is the thing which *Paracelſus* requires and aims at, and therefore ſhould not by any means hinder or deterr us; he preſently, for the better explication of his meaning, adds, Something ought to be made a Nothing; and again, the Nothing to be made Something; which thing the unskilful doth not heed or believe, that Metals being corrupted and made *Scoria*, when by the benefit of Art they are reduced, are by this means meliorated; which albeit it be moſt true, yet are they but a very few (as he ſaith) who believe it to be true: and he confirms the whole proceſs throughout the Chapter, even to the Chapter of ☿, and explains it, ſaying, *Corruption makes a good thing perfect.*

The Good cannot appear by reaſon of its covering. The hider or veil muſt be taken away, that the Good may be freed and become conſpicuous; that alſo the firſt covering, under which metals are hidden, and wherein they are generated, is a Mountain, Sand, Stone, or Earth, all which are to be ſeparated by fuſion, that the metals may become pure.

Here the Metallurgiſt deſiſts, and is clearly ignorant of any other covering. But *Paracelſus* addeth, That each metal is a hider of the other metals, which thing the ſeven Rules do largely demonſtrate, and adviſeth the Chymiſt not to reſt ſatisfied, when he hath gotten from the Mines a vendible metal, as ♂, ♀, ♃, ♄, melted from the droſs, but to conſult further with natural Philoſophy, and to examin whether or no theſe are pure enough, without any adhering and deteriorating veil.

How great the difference is betwixt a rude and a vile Mineral (where the metal is largely diſpers'd and commixt with much ſtony matter and other impurities) and a tractable metal faithfully ſeparated, is well known. So much, and more, is the difference betwixt a vulgar and imperfect metal, and the Gold and Silver which it contains ſhut up in its bowels. But becauſe the melting of metals out of their mines is, by reaſon of its long uſe, grown vile, and not eſteemed an Art, but a Trade, and every where exerciſed, without any ones admiration; yet in its beginning, before it became ſo commonly known, it was worthily accompted a deep Secret, although now diſreſpected. We may not doubt, but that even yet another veil adheres to metals, and may with as much facility be removed; and its inward, pure, and fixt center, Gold and Silver be melted out and ſeparated, if the way were but known. But becauſe men do not beſtow any further Labour and Induſtry in ſearching, and the uſe of vulgar metals is highly neceſſary, we reſt contented, in that metals once melted from their mines become malleable, and fitted for the uſe of man: Nor is this unadviſedly done, for the life of man can as little want Iron, ♃, ♀, and Lead, as it can gold and ſilver.

Paracelſus teacheth, That imperfect metals are corrupted and brought into a nothing, by the force of fire; which they cannot ſuſtain or bear; but their good parts, Gold and Silver, cannot be deſtroyed, but in the great ſtrait and force of fire do come together out of the imperfect metals, and mutually defend each other, the impure portion being burnt up and removed.

Now then, that the ſpecies and ingredients of this proceſs may be underſtood, ſomething muſt be mentioned by us thereabouts.

Thus then 'tis written; R. ♁ melt it with Nitre and Tartar, of this take one lot; 'tis to be noted that you are not to take the lot of the whole molten maſs, but of one of the two, either the upper part being the *Scoria*, or inferiour or lower being the *Regulus*, which this flowing mixture ſends downward.

But which it is, it cannot be perceived by the words; yet becauſe *Paracelſus*'s intention here is to deſtroy gold and ſilver by the admixtion of the aforeſaid ingredients, and to bring them to nothing, out of which nothing the deſtroyed augmentation of the ſun may be afterwards by ſome additament, obtained, in reducing it, it ſeems probable to think that the *Scoria* of the mixture is not to be taken, but the *Regulus*, which hath Ingreſs into Tin, Arſenick, and Schlich, and unites them with gold and ſilver, for it is the Property of the *Regulus*, to unite & conjoin contrary Metals and Minerals.

Tin is joined with malleable metals, and melted and ſuffers the fire with them, brings them into *Scoria*, the which thing Sulphur, Vitriol, and Schlich, alſo perform, and are here uſed by *Paracelſus* for no other end than to corrupt the ſun and moon, and bring them into *Scoria*. But what ſchlich (Schlich) this is, becauſe no proper name of Gold, ☽, ♂, ♀, ♄, or ♃, is added, no body can eaſily tell, for this is called ſchlecht by Chymiſts and Metallurgiſts when they take a Mineral excellently well ground, and waſhed with water, thereby ſeparating the mineral or the rubiſh and ſtone, the heavyer, and more noble part of the

metal remaining in the bottom of the veſſel, which examining they thereby Conjecture the value of the metal or mineral: this labour they call a bringing into *Schlich*, or alſo *Secher*, and becauſe all metals may be reduced into ſchlichs or calx, this word Schlich or Calx may ſuit with all metals, or elſe it may be that moſt ſmall duſt or powder in poliſhing mills, (Schleiff-muhlen) where various Iron Inſtruments, Swords, Breſt-plates, and other Arms are Poliſhed, and which is wont to be under the grinding ſtone in deep guttars deſtinated to that purpoſe, or gathered in wooden veſſels, and ſold to ſuch as dy black cloaths, and is called calx or Schlich. But now whether or no, he means this or the calx of any other metal, it is uncertain, nor doth it much concern; for the Sun and ☽ may be reduced into a nothing without any of theſe Calces, and may be again augmented, and brought into ſomething, as you ſhall ſee in the following Chapters of the Tranſmutation of metals.

Vain was their expectation who thought to turn all theſe ſpeices, thus blown together, into Gold and Silver, but yet could not get any other thing than a yellow, or ſpadiceous *Scoria* contrary to their hopes but the Corruſcation (Blick) is moſt bleſſed and gladſome, if any one can get by reduction from a deſtroyed metal brought into Scoria, a moſt noble one and better than heretofore it was. But this deſtruction and reduction is not uniform, but is perfected many ſeveral ways as the following Chapters teach.

The First Rule.

Of the Nature and Property of Mercury.

ALL things are abſconded and hidden in all things, but of all things there is one which is a coverer or hider of the reſt, and is a Corporeal Body, External, Viſible, Moveable: all fluxes are manifeſt in this veſſel, for this veſſel is a Corporeal Spirit, and therefore all Coagulations, and Conſiſtences are captivated and ſhut up therein being overcome by its flux compaſſed about and ſtrengthened thereby, what this flux is, its cauſe and name what it is called, cannot be found, becauſe there is no heat which may be therewith compared. The burning of the Gehennal *Fire may be likened thereunto, on which account this Flux hath nothing at all of Community or Affinity with other fluxes, which are melted by the heat of common fire, and become hard and coagulated by natural cold. Theſe fluxings or meltings cannot thus operate with* ☿, *they are too weak, he values them not; hence 'tis to be obſerved, that the mortal Virtues of the four Elements have no ingreſſive Operations upon the Cœleſtial Virtues, which Virtues we alſo call Quinteſſence, becauſe Elements cannot either give unto, or take any thing from this Quinteſſence; the Cœleſtial or Infernal Virtue cares not for the four Elements.*

Hence note, That none of the Elements, nor any Elementary thing, be it dry or moiſt, hot or cold, none of theſe can do any thing againſt that Quinteſſential Virtue, but each hath its operation and efficacy for it ſelf apart.

Glaub.] In this Chapter or firſt Rule of ☿, *Paracelſus* uſeth ſuccinct but yet perſpicuous words, ſaying, that the fluidity of Mercury ariſeth not from the four corruptible Elements, but from the Quinteſſence, and therefore hath not any affinity with theſe Elementary fluxings and meltings. Now, what this Quinteſſence properly is, which *Paracelſus* here mentions, much might be ſpoken, but 'tis not ſo convenient at this time, my ſelf and other Philoſophers have largely treated thereof, and therefore ſpeak not of it now.

This only I add over and above, That *Paracelſus* will have the Quinteſſence to be a thing not ſubject to the four Elements, but permanent and incorruptible, whereby he gives to underſtand, That ſeeing 'tis ſo, that the fluidity of Mercury hath its originality from the Quinteſſence, and not elementary Fire, ſo its coagulation is in like manner to be made by the Quinteſſence and not by the elementary Fires, be they hot or cold.

But now, what that Quinteſſence is, that coagulates Mercury, and tranſmutes him into Gold or Silver, it may be eaſily conjectured, that it is not to be ſought for out of Vegetables and Animals, but to be extracted out of Metals, and ought to be much more pure, fixt, and meltable than they are.

Many are the things which *Paracelſus* hath written of this Quinteſſence, attributing great Virtues thereunto; he that deſires it, may read thereof in his Writings. Likewiſe many Philoſophers affirm it to be a thing reduced by the benefit of Art into the pureſt and higheſt ſubſtance. Which name of Quinteſſence, ſome there are that attribute unto that Tincture, wherewith perfections are wont to be made. By which it is evident, That by the name of Quinteſſence is alwaies underſtood the moſt pure, the beſt, and the moſt powerful part of a thing. But be it what it will be, 'tis clear, That Mercury is a wonderful ſubject, nor is to be coagulated and fixed ſo eaſily, as many have falſly believed, and tryed the contrary to their great loſs.

Many are the Coals which have been vainly conſumed about his fixation, and are conſumed, although alwaies in vain; my ſelf have alſo, though not often, handled him with a great deal of tediouſneſs, which although not permanently fixt, yet obſerving therein many ſingular things, of which I count it expedient to relate ſomething. In him is a moſt great power and virtue, moſt friendly to Metals; he is eaſily mixed with the pureſt Metals, and moſt difficultly with the impure; which denotes him to be of a moſt pure nature: And now, if he come to be fixed, I could demonſtrate, if need were, by indubitable reaſons, that a thing more pure than Gold would flow therefrom. It alwaies produceth ſomething as often as it is added to Metals, and conſtrained to undergo ſome fire, helping them evidently, even whilſt it is in its Volatility; what then would it do, if being therewith fixed, it were along while melted with them in the Fire?

This I add for the better Lights ſake.

When I was in my youthful days, and ſaw many attempting to fix Mercury with Gold and Silver, by Amalgamation, Sublimation, Coagulation, Precipitation, and other Labours of that kind, to tranſmute it into Gold and Silver; my ſelf alſo attempted ſomewhat about him, by the advice of *Paracelſus*'s Sayings, That in Saturn its Coagulation is to be found. On this account I melted in a little Crucible 6 or 7 parts of Lead, and added one part of Mercury; this I put into another Crucible where Nitre did flow, that it might be covered over thereby; in the mean while I melted the glaſs of ♄, (being made of 4 parts of *Minium*, and one part of Flints) in a greater Crucible, whereto I put the two former Crucibles heated to be covered by the glaſs.

Theſe three I again ſunk into a new Crucible flowing with the glaſs of ♄, thinking that I ſhould this way keep in the volatile Gueſt, having now ſhut up Mercury in ſo many walls, I put him to the fire, intending to fix him, and then indeed he ſuſtained it, not being able to break through; but increaſing my fire, and the Glaſs melting with Nitre, away he goes leaving an empty neſt, and left ♄'s weight whole and perfect, which having examined, it yielded a grain of Silver heavier than the common ☽ which I believed to be Mercury fixt and coagulated, but reiterating that labour, I found it to be otherways, *viz.* that the Mercury was not it ſelf fixed, but flown away, but yet by his occult power penetrated and meliorated the lead, that it afforded a little ſilver; alſo the whole maſs of lead was hereby made black, and hardened like tin, whereby I perceived, that Mercury being a pure, meer fiery ſpirit, is moſt impatient of the Fire, and cannot be fixed without a Quinteſſence.

But thus much indeed it can do, if being joined with other metals, it can be ſo long held, as to endure the Fire; although it preſently vaniſheth away, it doth in a manner change them, not by bettering them, but ſtirring them up by its penetration, that they may mutually act each upon the other, and receive a meliorating faculty, although without any great profit, as far as I know, but I only intend to diſcover its poſſibility, its miraculous and almoſt unſearchable power, for it may deſervedly be eſteemed a Miracle of Nature. It is a meer inviſible Fire; albeit ſuch as are ignorant account it cold, and by Art it may be made far more fiery and volatile; which I ſometimes have tryed, where being often injected into a vehement fire, again and again, and received in Glaſſes, it hath elevated it ſelf without any fire, and gone away into its own *Chaos*. In a word, many men have accompliſhed prodigious things with Mercury, but all of them without any fruit; of which more ſhall be ſpoken in its place.

The Second Rule.

Of Jupiter *and his Nature.*

WHatſoever thing is manifeſt, (as the Body of Jupiter *for example) the ſix other Corporeal Metals are therein hidden ſpiritually, and one more profound and remote than another.* Jupiter *partakes not of the quinteſſence, but of the nature of the four Elements, therefore his fluidity is manifeſted by a little heat of the Fire, and his coagulation in like ſort perfected by a little cold, and hath communion with the reſt of the metalline Fluxes.*

Wherefore by how much one thing is in nature like to another, by ſo much the readier is it united thereunto, if they mutually touch one another; that alſo which is nigh, is more efficacious and ſenſible; for that which is afar off, doth not enforce, nor is that which is remote, how great ſoever it be, much feared. Hence 'tis that heaven is not deſired, becauſe 'tis far diſtant, nor ſeen by any one; neither is hell feared, becauſe it is far off, whoſe form none hath known and ſeen, nor felt the Torment, and therefore 'tis valued as nothing. Thoſe things then that are abſent, are little regarded, or plainly rejected, being conſtituted in a thick place, for by the property of the place every thing is deteriorated or meliorated; which thing may be proved by many Examples.

By how much therefore Jupiter *is farther off from* ♂ *and* ♀, *and nigher to the Sun and Moon, by ſo much the more Golden or Silver-like is he in his own body, and ſeems more great, potent, pellucid, ſenſible, more fair, pleaſant, notable, palpable, more true and more certain than elongated, or at a diſtance. On the contrary, by how much the more he is elongated, by ſo much the more vile and abject he is in the matters aforeſaid: for things preſent are alwaies more notable than thoſe which are abſent: by how much any thing viſible is nearer, by ſo much a thing inviſible is more remote. Therefore it behoves the Alchymiſt to ſtudy how he may place* Jupiter *in a ſpiritual* Arcanum *and remote place, in which are* Sol *and* Luna; *and that he may take* Sol *and* Luna *from far, and bring them near, into a place where* Jupiter *exiſteth corporally, ſo that the* Sol *and* Luna *may alſo be corporal and truly preſent before his eyes in the* Examen. *For there are various labours and modes of tranſmuting metals from their imperfection, into a perfect ſtate.*

To mix one with another, and again to ſeparate the one from the other pure and ſincere, is nothing elſe but a genuine permutation made by the labour of Alchymy. Note, that Jupiter *hath much Gold, and not a little Silver. Put to him* Saturn *and* Luna, *and the* Luna *will be augmented by the reſt.*

Glaub.] Although I do not certainly know the reaſon why *Paracelſus* beginning with Mercury, paſſeth next to Jupiter; nevertheleſs it is very probable that he would thereby point at ſome ſingular Myſtery. Here he repeateth the former ſentence, ſaying, Every viſible metal hideth in it ſelf the reſt inviſibly, from which if we would reap any good, their inviſible and ſpiritual Gold is to be taken and brought near, or to be viſible; and on the contrary, the viſible to be removed afar off and made inviſible. But how this ought to be done he doth not teach, but leaves the Reader to ſearch it out in his ſeven Canons or Rules, which are very difficult to be underſtood not only by a rude Tyro, but even by one well exerciſed: And ſeeing that not one in a thouſand underſtands them, it is no wonder that his Writings have been had in Contempt.

Without doubt he aimed at our good, ſuppoſing he had written very clearly, and directed his ſpeech in ſuch a manner, as if he had to do with one that is skilful in the metalline nature, without having any reſpect to the common blindneſs and ignorance, whereby he received great thanks, and was highly eſteemed of by all.

But what ſhall we ſay or do? 'Tis bad meeting with wicked proud men, as thou moſt clearly writeſt; yet becauſe the unexerciſed, if they have even once erred, they wrack and abuſe the Writer with meer ſlanders: Hence it comes to paſs, that many deſire rather to be ſilent, and leave unto fools their own toys and vanities: But the Caſe being with more accurate examination conſidered, it ſeemeth evil to be revenged on the Innocent as well as the Guilty.

As for Tin, if thou ſearcheſt into its nature and property, it is a pure (compared with the other metals) unripe metal, abounding with very much combuſtible Sulphur, whereby it obtains its liquifaction and corruption in the fire: which being removed (and it may be done with a gentle fire) it loſeth its metalline fluidity, and very much reſembles unmelted aſhes, whereto if you add another ſulphur, whereby that aſhes may turn into a metal; and again

converteſt it into aſhes, repeating this labour until all its combuſtible ſulphur being burnt up, it refuſeth to go into aſhes, by Calcination, and then melt it, 'twill eaſily give forth its gold and ſilver in the trial (im abtreiben.) Now, in the being mixt with Lead, it cauſeth a ſtrife in a ſtrong Fire, and getting uppermoſt, turns into aſhes, that is to be imputed to the combuſtible ſulphur, whereby it ſo being melted with Gold, Silver, Copper and Iron, it makes them brittle like to Glaſs, but being diſpelled of that Sulphur, by roaſting or calcining by Incineration or Cementation, or any other way, it doth not any more make them brittle (which thing to do is full of difficulty) but is melted with them, and moſt eaſily ſeparated with, Venus (laſt ſich ſehgern) ſhe knowing how by her kind and flattering words to perſwade the two old men ♄ and ♃, mutually to abide each other in the fire; Gold and Silver will alſo do the ſame thing; but becauſe they are precious and eaſily flow out of the Crucible, and the Work may periſh, it is ſufficient to uſe ♀, which alſo will give from it ſelf its own hidden Gold and Silver, and not to take theſe metals which are purified with great labour, and drown them afreſh in impure metals, and deſtroy them.

There are alſo other waies of purging ♃, from his ſuperfluous ſulphur, *viz.* a Nitrous fire. If filed ♃, being mixt with Nitre, Sulphur, & Sawduſt, be kindled, part of the tin is elevated up into flores, and a part remains reducible in a ſtrong fire, which is to be ſo often handled the aforeſaid way, till all the ſubſtance be reduced into flores and aſhes, the metallick form and nature being moſt plainly deſtroyed; after this, let the flores be gathered out of the Receivers, and the aſhes elixiviated or waſhed, and by the help of a good Flux be reduced into a metal, which is to be again filed, ſublimed, and burnt, as before, until all the Tin remains like Sco ria, and will not ſublime; which being melted with Lead and ſeparated, (mit Blen amſtieden vnd abtreiben) thou ſhalt find gold and ſilver ſhut up in its bowels.

Likewiſe pour fixed Nitre (the liquor of it) on the filings of Tin, digeſt it its time, ſupply the evaporating moiſture with new Liquor, that it may be alwaies moiſt, but yet let it not be too wet, but like thick water. This Liquor diſſolves and takes away the combuſtible ſulphur of the Tin, and fixeth that which is incombuſtible, and makes it capable of enduring the fire; ſo that being melted with Lead, and purged (aenſieden vnd abtreiben) it yields its gold and ſilver.

Another ſeparation is thus inſtituted; Reduce Tin with common ♄ or *Regulus*, ℥j. into Glaſs or Amauſa, which keep a good while in Flux in a ſtrong fire, (forget not the inceration of Nitre or ſalt of Tartar) by which labour the purer parts of the ♃ being gathered together, do give a *Regulus*, the impurer parts ſeparating themſelves with the Lead and Salt into Scoria, the *Regulus* being purged (abgetrieben) thou ſhalt have the fixed gold and ſilver in the Cupel.

But 'tis to be known, that theſe Operations may be done without Copper, but yet will yield more ☉ and ☽ if Copper be added; not only for that the ♀ it ſelf gives forth its ☉ and ☽; but becauſe Tin of it ſelf, without the admixtion of ♀, doth not willingly let go its own ☉ and ☽. But in ſeeking of ſhelter amongſt its own ♀, and withdrawing it ſelf to the *Scoria*, is there hidden (the Labour being finiſhed) the *Scoria* can no more attract it into it ſelf.

♀ therefore is as it were a Receptacle, wherein the Sun and Moon collected and ſeparated out of the maſs, can defend and hide it ſelf, and is by Chymiſts called a Bath or *Balneum*.

In the 4th. Chapter, which treats of ♀, a more large account is given of this labour of metalline Glaſs. Moreover gold and ſilver may be ſeparated out of tin in this wiſe.

Melt common Lead in a Teſt (treib ſcherben) under a Muffle (een muffel) and being throughly hot, caſt in a little ♃, and it will incontinently have Ingreſs, but will forthwith aſcend and kindle like burning ſparks and go into aſhes; which muſt be taken off with a crooked Inſtrument, and more new Tin put in; which being burnt, let it be taken out. Repeat this labour ſo long, till all the Lead be devoured as it were by the Tin.

Put theſe aſhes on a Teſt, under a Muffle, and let them be yet well heated by the fire for an hour; ſo that if any grains of ♄ remain, they may be made aſhes, and the calcined aſhes of the tin may be the better fixed. Reduce theſe aſhes, and 'twill become a metal, which let be again made aſhes upon a Teſt; repeat this labour, until in reduction it refuſeth to go into a metal, but remains a *Scoria* and a metal deſtroyed; which put into an excellent Crucible, and by a Flux made of Tartar and Nitre, let it melt its due time, and the fixed Tin, together with part of the Lead, will go to the bottom into a *Regulus*; which being waſhed (abgetrieben) makes manifeſt the gold and ſilver hid in the Tin on the Teſt. This Labour is neat, eaſie, and but of ſmall charge, eſpecially where wood and coals are cheap, the *Scoria*, from which the *Regulus* is ſeparated, is not to be thrown away, but kept for other uſes, of which we ſhall preſently ſpeak.

Now he that promiſeth Gain unto himſelf from this ſmall work on a Teſt, is deceived, becauſe hereby is only found how much ☉ and ☽ is contained in an hundred weight of ♃, and what coſts are expended in its melting, whereby may be computed what gains may be expected every day, nor indeed is this work (thus done under a muffle) ſo profitably accompliſhed, as 'tis in greater Furnaces, where being a greater heat of fire, a more plentiful gain is promiſed. And although becauſe of many various Imployments my ſelf never tryed, yet I will briefly delineate and deſcribe how a large Return may be made, according to Calculation, computed by a ſmaller quantity.

An hundred of Tin requires 10 or 12 C. of ♄; (the work being wiſely handled) the price of the Lead, ♃, Coals and Labour, being ſummed up, and being ſubſtracted from the ☉, there ſeems to remain but a very little to defray the charges. But if you look thereinto a little more narrowly, you will find a recompence and benefit ariſing thence, not to be deſpiſed, eſpecially if you uſe Lead impregnated with ☽, which by reaſon of not conſidering the benefit and gain, remains unſeparated therefrom. Likewiſe you may uſe a golden ♃, ſuch being often found as contains as much ☉ as the ♃ coſts; and you may alſo meet with ♄, which contains as much ☽ as the Lead is worth, but not ſeparated by the Refiners, becauſe they are ignorant of this ſeparation, which by the uſual way cannot be ſeparated with profit: and that your Labour may be the more beneficial, you may add to your ♃ ſome golden or ſilver

ſtones

ſtones and minerals, as Marcaſites, ♁, Arſenick, Auripigment, Cobolt, and various Pyrites or Kiſij (which becauſe of the ſmall quantity of their included ☉, are never wont to be melted) & let them be *ſcorified*, which yielding alſo their gold and ſilver, do bring in a greater profit; but eſpecially if theſe Minerals having been firſt melted with Copper, are by the benefit of Iron (or melted with Iron) brought into *Regulus*, and their Gold reduced to a narrow compaſs, which *Regulus* being thrown into the Lead, together with the Tin, let be made into *Scoria*, and then their ☉ is gotten without much charge, and is depurated by the Tin. But now, if you would have this ſeparation profitable, it is not to be done in Crucibles, but in well compact Furnaces or Hearths, whereon the bright flames running, let your metals be throughly heated or calcined, and your Calcination, Incineration, or Annihilation being accompliſhed, let Reduction be made in an acute Furnace, (im Stichofen,) of which thing my time permits me not to give any larger account; its ſufficient to have experienced the truth thereof in a leſſer quantity; any one may try his fortune in Metallick Operations.

Now, although there are more waies of ſeparating ☉ and ☽ from ♄, yet what I have already declared ſeems ſufficient for this time; the following Chapters, wherein the nature of the other metals is treated of, will manifeſtly open what I have decreed to diſcover concerning them.

The Third Rule.

Of Mars *and his Property.*

THe ſix hid Metals have thruſt out, or expelled the ſeventh from them, and made him Corporeal, leaving unto him loweſt Dignity, and impoſing on him the moſt thick hardneſs and labour. In this body have they manifeſted their whole ſtrength, and hardneſs of Coagulation to be, ſhutting up, or keeping inward, their Colours and Nobility, with their Fluidity. 'Tis hard and full of Labour, to make a Prince or King of a Peaſant, or common Fellow: But ♂ by his Vertue, obtains Honour, and gets up into the high Throne of the King: But 'tis expedient, that care be uſed, leaſt haſtily poſting forward, he be taken. It is to be conſidered by what Art ♂ may be promoted to the Throne; but the ☉ and ☽ put in the place of ♂ with ♄.

Glaub.] We are come now to *Mars* in order, it being the 3*d*. according to the Compute alſo of the Aſtonomers, deſcending from above. Now *Paracelſus* doth not attribute the firſt place to ♄, as the Aſtronomers do, but to ☿; and haply, not without great Cauſe, hinting hereby ſome ſingular thing. He goes on, and ſays *Mars* is rude, ſharp, and thick, becauſe the other Metals have caſt out their moſt ignoble, and baſeſt part upon him, which thing experience teſtifies: He is compoſed of hard knotty Timber, and hath in him but little good; he is ſharp and churliſh, and not at all to be compared to gentle, tender, and noble ♃; but if he be once freed from his knottineſs, which is hard to do, and render'd tractable, he ſhews his Virtue, and diſcovers himſelf alſo to be a partaker of the Royal Blood. *Paracelſus* adds, that ♄ can take away his knots, and elevate him to an higher degree, although the Aſtronomers are very much diſpleas'd with the Conjunction of theſe two, as being the Author of all evil, and have therefore inſerted peace-making, and benign *Jupiter* in the middle. Now that Lame *Saturn* may poliſh and make crabbed ♂ ſmooth, *Paracelſus* tells you that there's need of Caution, leſt by over haſtineſs, he bring loſs upon himſelf. He ſtoutly reſiſts, nor doth he eaſily yield, but rather buſily contrives how to captivate and deſtroy others; yet *Paracelſus* mentions its poſſibility; whoſe Reaſons, Way, or Manner, we will briefly illuſtrate. ♄ indeed is by Birth, fitted to waſh the other imperfect Metals, and to purge them from their ſuperfluous Sulphur, if any good doth accidentally adhere unto them, but knows not how to remove their radical, and innate Impurity; and that it is not alone ſufficient for this thing, the trial of the Teſt witneſſeth; for although you add Iron to ♄, to be ſeparated upon the Cupel; (Abgehen Laſſen) yet hath it no ſincere ingreſs into ♄; but if it be ſo far brought by great labour, it doth not remain, but ſpeedily ſeparates to the Superficies, like *Scoria*, and leaves nothing with the Lead, but what was accidentally in it, himſelf withdrawing with his whole power, and native goodneſs; Tin alſo doth the ſame; but Copper albeit it ſwims not upon the Lead, nor goes away, yet it is not therewith radically joined, but being reduced with the Lead, into Liquable *Scoria*, deſcends into the porous Aſhes, of which we have accurately treated in the Fourth Part of our Furnaces, and in the Appendix.

Lead is not therefore the true waſhing of Metals, but that it may ſo become, 'tis clear that it muſt be aptly prepared; and if you do more exactly contemplate on the thing, you'll find it very rational; for by what means can ♄ the (moſt liquable of all the Metals, freely copulate with ♂, which is the hardeſt: Indeed 'tis true, that they enter each into the other by mutual fuſion; but 'tis forcedly and ſuperficially, not radically; as if one boils Water, mixt with Meal, into a Pulſe; the Water thickens, the Flour moiſtens; yet neither entring into the other, radically; but the Water getting into the Pores of the Meal, or Flour, makes it Pap: In the ſame manner is it with ♄ and ♂, they are indeed mixt; but cannot equally ſuſtain the violence of the Fire. ♂ doth not alter his breeding or wit; but in the melting together, remain an hard, and not eaſily melted Metal; nor is the humidity and liquability of the Lead hereby corrected; for although they are become one Maſs, yet each keeps his old Condition: but if they are ſo order'd, that both of them may undergoe the ſame Fire; then the Iron will yield, and deliver his Gold unto the Lead, and his warm Volatile Sulphur maturates the Silver, lying hid in the Lead; exalts it, and makes it corporeal, that each beſtows on the other, his Goodneſs and Virtue; each ſupplies the others defects, and both are perfected; for although hard crabbed ♂ be made flow with liquid and combuſtible Sulphur, or a Sulphureous Mineral, as ♁, *Arſenick*, or *Auripigment*; yet is not any tranſmutation made, each remaining in his own Nature, without alteration; like as ☿ being reduced into an *Amalgama*, with ☉ or ☽, makes no ſolution, only adheres unto the Gold, and eaſily ſeparates therefrom, leaving the Gold to himſelf: But if any one know how to conjoin, ☉ and ☽ with *Mercury* radically, they would not forſake one the other; but would perfect themſelves mutally in a ſtrong Fire; ſo would the other Metals too, were they but radically commixt. Some one may ask, what is this radical or ſpiritual Com-

mixtion of the Metals, and what I underſtand thereby? for Anſwer, They are to be ſo united with an implanted Love, that they freely join together, and ſo remain equally, enduring proſperity and adverſity; and neither of them diſcernible from the other, that they penetrate the ſhut Gates, and thick Walls, without any obſtacle; that the Volatile exhales not in the Fire: that which is liquable, ſeparates not from what is illiquable; thereby penetrating the Veſſel, leaving behind it, the more fixt, or rougher part, in the form of *Scoria*: But thou mayſt demand by what means I ſpiritualize the Metals, and radically conjoin them; what, muſt they firſt be diſſolved in *Aqua fortis*, or other corroſive Spirits, and be diſtilled by an *Alembick*, that they may become Volatile? No, I mean not any of this; this kind of ſpiritualization is a meer deceitful, and cheating Labour, hindering many thouſands, which otherwiſe would be nigher to the Truth: All the Philoſophers diſſwade you therefrom, that you do not torment the Metals with ſharp ſpirits, whereby inſtead of being perfected, they are corrupted and mortifyed radically. 'Tis madneſs to pour more Water into any one that is ſuffocated with Water, thereby to reſtore him to Life; this is to put the Bridle on the Horſe's Tail. Now 'tis evident, that the ſuperfluity in imperfect Metals, is their combuſtible and corroſive Sulphur; and by how much, the more imperfect and baſe they are, ſo much the more of a combuſtible Sulphur do they poſſeſs: an evident Teſtimony, of which we have in Iron, or ♂: 'Tis only his acid Sulphur that deprives him of every degree of dignity, which groſs, acid, and vitriolated Sulphur, did he not ſo much abound withal, he would not contract Ruſt ſo eaſily; and by the attractive Moiſture be ſo ſoon corrupted: and were he not ſo quickly ruſty, he would be put to better uſes, than now he is. But you may object, that you cannot conceive, how he can have ſuch a corroſive Sulphur, whence ſhould it happen to him, for the Mineral, and Stones, whence he is extracted, do not appear to be impregnated with ſuch a Sulphur; whence comes it therefore to be in him? Beſides, if the Mineral did partake of ſuch a Sulphur, ſurely it would never abide a Fire ſo violent, but it would be driven away.

My Friend, thou doſt not at all underſtand the Nature of Metals, and for what end it was, that Nature left ſuch a Sulphur in Iron, and the other imperfect Metals; for it is a Nutriment unto their better Parts, being like an *Embryo*, and as it were, a Covering or a Matrix, in which a noble Child is maturated, and is (after the ripeneſs of the pure Metal) thence excluded. For Natures intention was not, that Iron ſhould be but Iron, but rather Gold; but the digger not willing to wait ſo long, and knowing the manifold uſes of Iron, allows not time for it to become Gold, juſt like the Fiſher-man (who catching a very ſmall Fiſh, and the Fiſh deſiring to return into the Water, until being grown bigger, he might the better fill the Platter) ſaid, nay, but I will hold thee, as thou art, for 'tis uncertain, whether or no, being grown bigger, thou mayſt then be found. Juſt thus doth the Miner do, he waits not the Irons becoming Gold, but puts it to its preſent uſe.

'Tis commonly known, that there is abundance of corroſive Salt therein, which is not combuſtible in melting Fire, neither needs it any further demonſtration; it having been alſo treated of in the Annotations of my Appendix: and that thou mayſt ſee that a Metal can preſerve, and keep its volatile combuſtible Sulphur in a melting Furnace, I will expound it ſomewhat clearer: Gold having already obtained its perfection (it being a mature product) Nature hath ſeparated this combuſtible Sulphur, or acid volatile Salt therefrom; becauſe it needs it not for any further nutriment: neither would it hold it, if it ſhould be put unto it, but thruſts it from it in the Fire, and hath no affinity therewith, as the other imperfect Metals have.

Now *Luna* although it be not ſo compleatly perfect as *Sol*; yet, 'tis more perfect than the others, and hath notwithſtanding, a Commerce with this ſulphureous Salt; yea, ſo as to hold common Sulphur a very long while in a great heat, which we ſhall declare anon in the ſeparation of Metals; and if ☽ (which is almoſt a ripe Metal) doth thus, queſtionleſs the other more imperfect ones will do it more willingly; which thing, that you may be the more aſſured of, incorporate a ſulphureous Salt with any Metal, and continue it in a great heat; and after a few hours you ſhall ſee that your Metal will hold that Sulphur, and defend it againſt the force of Fire; but if a Metal be in ſome ſort freed from this ſulphureous Salt by a melting Fire, it doth again receive and hold it; Will it not therefore hold its own, wherein it was born and from whence it came forth. ♂ excells them all as to this, being not only a friend to ſulphureous and corroſive Salts, but alſo to Vrinous which (when it cannot have acid ſalts) it doth by a magnetick power attract and defend theſe in the fire. For example; mix the filings of ♂ with Nitre and ſalt of Tartar, and theſe ſalts, in a melting Fire, will be fixed with ♂, and reſiſts the Fire. Which thing is moſt worthy obſervation, and by no means to be neglected.

But to return to my former purpoſe of demonſtrating, that Imperfect Metals are not only, not bettered by corroſive ſalts and ſpirits, but are rather corrupted: Daily experience doth prove it before the eyes, that all ſuch as have uſed corroſive ſpirits in their bettering of metals, have done no good at all therewith, but have, to their hurt, loſt both their time and labour: whereas thoſe that have uſed other *menſtruums* that are not corroſive, have profited more therefrom, and have ſeen more than they have ſought; ſuch as thoſe are in a way tending to diſſolve metals without corroſives; to make them ſpiritual, and radically to unite them, that they may mutually act in, and ſuſtain or undergo the Fire alike, and may co-operate to purity and perfection, and may ennoble themſelves. Of which *Spiritualization* more ſhall be ſpoken in the Sixth Chapter, where *Paracelſus* alſo treats thereof. This therefore do I affirm of ♂, that he muſt be handled with ſuch *menſtruums* as are not only not corroſive, but contrary to Corroſives, and ſuch as mollify and ſeparate thoſe Corroſives which the Metals hold in fuſion, that ſo for the time to come they may attract no more any moiſture, and thereby contract Ruſt, and be corrupted; but may be rather able to preſerve and defend themſelves againſt Corroſives and combuſtible Sulphur. But let none think, that ♂ being by this Antidote freed from its thick, earthy, and combuſtible, and corroſive ſulphur, will be wholly turned into ☉, for 'tis the ſmalleſt part of ♂ that is good: by how much the ☉ is more noble than common ♂, by ſo much is the ♂, from whence

whence the Sol is ſeparated more vild than other Iron, and the remainder is nothing elſe but a moſt vild Earth or *Scoria*, void of all metallick fuſion. The milk of a Cow or another Animal, if unmixt with water, is good milk; but yet 'tis far inferiour in goodneſs to pure, good, well-wrought Butter; and by how much milk is more vild than butter, by ſo much is the whey and acid milk from whence the Cream is ſeparated, more vild than that which is ſweet and abounds with Cream. If generous wine be ſpoiled of its ſpirit moſt ſweet and moſt excellent, by the benefit of Deſtillation, one part of that is better than 12 parts of wine out of which it was extracted; the remainder cannot be wine any more, but is much inferiour to good wine, as wine is to the ſpirit.

The like is it with Metals, which being deprived of their ſoul, whereby they obtained a metallick form, they can no more be malleable Metals. Therefore 'tis good to conſider whether or no in the ſeparation of ☉ out of the Imperfect metals, it will be anſwerable (in value) to the metal, and other Expences neceſſary about extracting it; but now, if you know how to apply the reſidue of the Metal to other uſes, you may with the more confidence attempt the ſeparation. But to return to the words of *Paracelſus*, I will ſhew how ♂ may, through ♄'s help, arrive to a Kingly dignity. I have before ſaid, that there is no familiarity between the moſt fuſile and moſt hard metal, but the one will be gone away in fume before the other will melt, and that we cannot want ♄ in the ſeparation of ♂; but how it is to be handled, I will briefly explain.

Saturn of himſelf is liquable and volatile, but yet can be made illiquable and fixt without detriment of the Radical Moiſture or Metallick Nature; ſo as to undergo the ſame Fire with ♂, and being brought to this paſs, it is then fit for the ſeparation of ♂. 'Tis many waies made illiquable (Hartflüſſig) but the beſt way is by fixed Salts, of a contrary nature to the ſuperfluous Sulphur in ♂, and excellently well ſeparated from the *Reguli* made of ♂; for Nitre and Salt of Tartar do not only harden ♄, but unite other metals with him, making them ſpiritual, and moſt like to tranſparent, ſoluble Glaſs, the which having ſuſtained the Fire their proper time, the Agent being taken away, and the Patient ſufficiently purged, the pureſt part of the Metals, thus ſpiritually mixt together, doth by the force of ♄ ſeparate from the other unprofitable part. The *Regulus* is purged eaſily, ſo that there's no need of ſeparating the whole Maſs by precipitation and reducing it into *Reguli*; but ♄, by his innate force, doth in its due time finiſh the ſeparation or precipitation of the pure from the impure, of metals thus ſpiritually commixt and united. This is enough ſpoken concerning the way of ſeparating gold out of ♂, by ♄, *viz.* ♄ being firſt fixed by ſalts, and made hard to melt, ſo as to endure the ſame force of Fire with ♂, or otherwiſe 'twill be impoſſible to have any thing from ♂ by the uſual way of the Refiners, by the help of ſcorifying with ♄ (mit anſieden) and ſeparation (abtreiben) which even as ☿ alſo doth not ſtay with common Lead in a ſtrong fire, but ſeparate themſelves and go into *Scoria*; the which we have alſo hinted in the Firſt Part of this little Book, whereto we referr the Reader. This ſeparation of ☉ out of ♂, may be done with *Regulus* of ♁ and Nitre, and in ſome manner better than with common Lead, but that I do not deliver the whole Proceſs from top to bottom, let no body wonder thereat, for then the Book would grow to too great a bulk, and I ſhould not receive any reward the more from the Unthankful: Let it ſuffice, that I have declared the manner and the Species wherewith 'tis to be done; for 'tis for the ſake of ſuch Chymiſts as are moſt expert in the Fire and Metalline Works that I write, and not for the common Deſtillers of Waters. And as touching what may tend to illuſtrate what is ſaid, it ſhall be ſupplyed with ſome Proceſſes at the end of the ſeven Rules.

Whereas I have attributed to ♂ in the Firſt Part of this Treatiſe and elſewhere, that he doth not only unwillingly deliver his own gold, but alſo if any be either accidentally, or of ſet purpoſe, added thereto, he ſwallows it up and hides it, and will not reſtore it without detriment and loſs. Some body may admire how it's poſſible for to be done ſo eaſily by ♄ and Salts; let him know that this Extraction of ☉ out of ♂ is not any the common Examen or Trial, (abtreiben,) but a true and Philoſophical ſeparation (Scheidung) wherewith ♂ being well diſſolved, is moſt throughly ſeparated from his thick and hard body, concerning which, I never met with any full pregnant Proceſſes any where. And albeit that I am not ignorant that many, yea moſt that read, will not have any higher thought or conſideration, yet I ſay that there is ſomething elſe hereunder; and do believe, that it is to be eſteemed far more excellent than Sol it ſelf; which that thou maiſt not over-much trouble thy head about, I will not be ſhy in communicating it alſo unto thee. *viz.* Out of Iron is prepared a Salt without any corroſive, which is able to extract the ſoul from Gold, that it will remain half dead. But ♂ will be impregnated as it were divinely, ſo as to be able to give forth a golden Child: the debilitated Gold will recover its loſt Colour and Virtue by ♀ and ♁. Other Philoſophers have likewiſe made mention hereof, *viz.* that ♂ will not ſpare even the King, out of whoſe bowels he will ſteal Treaſures, and will not bluſh to adorn himſelf with the ſame. Concerning which Secret the moſt famous *Sandivow* wrote on this wiſe. "The "Chymiſts know how to change Iron into Copper or "♀, without the Sun: They likewiſe know how to "make ♀ out of ☿: Others there are that can make "☽ out of ♄; but if they knew how to adminiſter "the Solar Nature to theſe mutations, queſtionleſs "they would find a thing more precious than any "Treaſure. On which account I ſay, that we muſt "not be ignorant of what metals are to be conjoined "one with the other, and whoſe nature of them "correſponds to Nature. There is therefore given "one metal, which hath a power to conſume the "other metals, for it is as it were almoſt their wa"ter and their mother; one thing there is that on"ly reſiſts it, and is bettered thereby, *viz.* the *humi*"*dum Radicale* of the Sun and Moon; but that I "may diſcover it, 'tis called *Chalybs*.

Thus you ſee, that from ♂ alſo ſome good is to be gotten, although all ſpeak ill of him; and indeed he is wicked if he gets poſſeſſion: Nor will he ſpare the higheſt Powers, from whom he will forcibly wreſt their hidden Treaſures, but yet by Commerce with ♀ he will again repay it in time to be diſtributed amongſt the ſubjects; although the king being robb'd of his goods, looks pale upon it, yet he lays not down his Life, and he remaining alive, there is no cauſe of complaining, for as long as the Riches are not exported, but remain in the King-

dom, distributed amongst the subjects, he is able to receive his former majesty and splendor from his Revenues, and to gather new Riches, and preserve his kingly dignity whole and sound.

Here I foresee that our common Know-littles, in the light of Nature, will traduce me, as if I enterpret *Sandivow's Chalybs* to be common ♂, and say that 'tis not to be understood according to the Letter, but the Author would hint somewhat else thereby; but 'tis no matter, what I have written, I have written, and that not without cause. I am not ignorant, that he means not common Iron no more than I, but his inmost Magnetick force and power, or essence, prepared without corrosive, and known to few, which doth most greedily extract and transmute the soul of Gold above all other things. And herewith we will rest and cease.

The Fourth Rule.

Of the Nature of ♀.

THE other Six Metals have in ♀ *framed all their colours, and the* medium *of their Flux (with inconstancy) into an External body. It would be therefore profitable to hint to the understanding by some examples, by what means the visible may by the benefit of Fire be made invisible, and this again made visible and material. All combustible things may naturally be changed in the Fire, out of one form into another, as into a Coal, Soot, Ashes, Glass, Colours, Stones, Earth, but the Earth is reduced into sundry metallick bodies; and if a metal combust or corrupted with old age, is thereby become unmalleable, sharp, and brittle, let it well flow, and 'twill again become malleable.*

Glaub.] Although that ♀ being malleable more than all the metals, in and out of the Fire, is fit for all Operations, yet even this is not void of a combustible sulphur, but is radically polluted therewith, so that it will most easily, of it self, without addition of any other sulphur, be reduced into *Scoria*, and be corrupted, which corruption is occasioned by the muchness of its combustible sulphur; Gold and Silver being void of that Sulphur, are not subject to destruction. So that, although they undergo the Fire a most long season, yet go they not into *Scoria* like the other imperfect bodies; and for the reducing of them into ashes, combustible sulphur must be added; whereas the imperfect metals too much abounding with the same, are changed by a most light heat into Ashes, Powder, or *Scoria*, which *Scoria's* are melted into either transparent or darkish tincted Glass, according to the nature of the metal; which Glasses may be melted into malleable Metal, and again into Ashes and Glass, as you please, but alwaies with some loss, by reason of some combust parts irreducible into metal, the metal also remaining, as it was at first, without being any thing bettered.

He who knows how to melt Metals into pellucid Glass, by the addition not of metallick things, but of such things as have affinity with the metals, as Salts, Sand, or Stones, shall in reducing them, alwaies find his metal better than it was in the beginning: And that the Reader, for whose sake I have written these things, may the more throughly understand my mind, I will explain it somewhat more clearly. *Paracelsus* hath above affirmed, That every visible metal is an hider of the other metals lying hid invisibly therein, and that the hider is to be removed, if you would that those visible metals become visible and corporeal, which being most truly spoken, I know not what light it may be illustrated withal. The words also are succinct and easie to be understood, yet no body believes them; There's scarce one amongst an hundred that conceives what they tend unto. *Metals cannot be changed without putting off their metalline form*; for if you keep them along time in Flux, by themselves, or joined with others, if they remain in their Corporality, they cannot help each the other, but being destroyed either by themselves, or joined with other Metals, and nourished in the fire their due time, it cannot otherwise be, but that they should be bettered, for so long as it retains its metalline form, it cannot be holpen. 'Tis necessary that a hard body be broken and annihilated, before there can be made a separation of the pure from the impure.

But this is to be done by a genuine Chymical manner, and they are to be dissolved and throughly opened, with things of affinity with them, whereby the purer parts may be united, and the more gross may be separated. If a metal be forced with a most vehement Fire, its parts do firmly hold together; for if it be fixt, then the parts abide in the Fire; but if volatile, then the parts thereof fly away together, their natural bond holds them together, defending them against the Fires power, but dissolve their bond, and then they are compelled to submit to *Vulcan's* Force and Empire, and will let you make of them what you please. It may well shame the Chymists to work so disagreeably with Nature, and may well learn by the Husbandman's labours to send for Nature's help. The Husbandman therefore, when he sows his seed, to have a good Crop therefrom, he casts not his grain upon any sort of earth, without consideration, but chuseth such earth for each proper seed, as being well dung'd, may suit best therewith, and in a convenient season sows his grain, that it, being putrefied and annihilated, may be multiplied, he leaves it to the warmth of the Sun, and to the vivifying Rain to concoct and maturate it; well knowing, that without precedent putrefaction and loss of its form, it cannot be multiplied. He likewise knows, that when it hath arrived to its maturity it must not be left in the Field, but must be reaped, and then the better and more heavy part is to be fanned and separated from the lighter and worser part, *viz.* the Chaff; the which operation is, by Experience and long Use, known to be good and needful. This Process must a Chymist observe, for one Metal may be made the field of another, wherein putrefying, it may get it self a new body, which being done, he must likewise know how to separate the new body from the *fæces*, from which 'tis gathered and made; and how to fan *Vulcan* like the best and most ponderous, from the lightest, for both of them will be made better by the foregoing preparation, and the annihilation of the bodies. When a Country-woman intends to separate the better part of the Milk from the more gross and cheesy part, she puts it in a quiet warm place, that the best part may rise up, and the worst part go down; the which being as yet not sufficiently purified, she adds her art, and puts it into a Churn, and doth so long stir or agitate it until another separation be made of the pure from the impure, which we call *Butter*; which notwithstanding, had it lain never so long

by

by it ſelf, had never come to have been Butter, without the Hand and Art of the Country-woman. Who would believe that in Milk there lies Butter, if he did not daily ſee it? This ſeparation of the Butter from the wateriſhneſs, proceeds from the quick ſhaking and agitation, whereby the Milk heats; and if it doth not fadge, then do they put thereto ſome warm moiſture, which uniting it ſelf with the moiſture of the Milk promotes a ſeparation, for heat alone is the meer cauſe of haſtening the ſeparation. This now may ſeem a groſs Example to the Ignorant, but let none imagine that this ſeparation of the Butter from the Milk is alledged in vain, but rather to ſhow the way how out of imperfect Minerals the golden and ſilver milk or part, is to be ſeparated by the acceſs or addition of a warm Mineral water, and by the Fires agitation: Even as warm Water helps the moiſture of the Milk, that ſo it doth the eaſier ſeparate its own heterogeneous Butter (and yet the way of ſeparating the Butter from the Milk, without agitation, by the affuſion of a warm thing and coction, is not unknown;) ſo alſo the Metals are ſeparated, if they are along time boiled with their own Water.

Now, becauſe of themſelves they are compact bodies, if you keep them in Flux a long ſeaſon, they remain compact, and are not able by their own power to ſhew forth their Good or Evil, nor make it appear, whether or no they contain Gold or Silver: They are to be a long time boil'd with Water, that being diſperſed, they may be tranſlated out of their metalline nature, and the pure (by the agitation of the Fire) may be ſeparated from the impure; which purer part of the metal doth not ſwim at the top, like Butter, but ſettles to the bottom like a *Regulus*, after the metallick manner, and all being cool, it muſt be ſeparated from the *Scoria*, and in a Cupel be waſhed to the utmoſt purity (abgetrieben).

But now 'tis worth the while to know what Water this is which is fit for this Work, and makes a ſeparation of metals; for ſeeing that it muſt have power to diſſolve metals, it's expedient that it be a friend unto them, and of the ſame kin, or (that I may ſpeak clearer) 'tis fit that it be their diſſolver and examinator; and this old *Saturn* hath power to do, out of which it may with ſmall coſts and labour be prepared; but the common *Saturn*, although it be called the Water of Metals by all the Philoſophers (but in the uſual waſhing in the Cupels 'tis not found ſo to be) yet as long as it remains in a compact metalline form, 'tis unfit for this thing; let him firſt be made Water himſelf before he reduceth the metals into water; which work is eaſie, of ſmall coſt, and of a few hours labour, and it goes into Water, and the Metals are thereby waſht. Of which more ſhall be ſaid in the following Chapter of ♄, and elſewhere. This alſo is to be noted, That if Copper being diſſolved with the Water of Lead, be digeſted its proper time, the moiſture dries, and the metal is hardened, and returns into a metallick body; therefore the Solution is to be kept alwaies liquid by the affuſion or pouring on of new water, leſt the mutual action be hindered, which the Philoſophers call *Incineration*: Which being neglected, all the Work doth not preſently periſh, but there remains moſt elegant *Amauſa*, and tinged Glaſs, which ſhines among the Copper, giving out from it ſelf a Blood-red Colour, wherewith not only wooden Veſſels may be adorned, but alſo Glaſs-Painters may uſe it; of which red Glaſs there hath been ſome found in old Churches; but 'twas believed that the Art was throughly loſt; but this came not by chance without doubt, but was purpoſely concealed by thoſe whoſe practiſing hereabouts did perceive a better thing to lie under it; for the red *Amauſum* or Glaſs, being burnt its proper time with a ſtrong fire, gives a *Regulus* yielding in the Leaden waſhing (im abtreiben) good Silver. But if you ſeek for ☽ out of ♀, it's better not to make the red *Amauſum* or Glaſs at all, but to keep on with Inceration, that it may not come to be red, but may remain a pellucid and green Glaſs, even until ♀ be well waſht.

Moreover this is to be noted, That ♀ and the other metals are not only reducible into ſoluble and inſoluble Glaſs, by this *Saturnine* Water, but the ſame is to be done by the addition of clean Flints and Salts, by which they are made much fairer than thoſe done with ♄; but in the ſeparation (Scheidung) they are vilder, becauſe the Diſſolvent is not ſo metalline, and after purgation, they do not ſo eaſily give their *Regulus* as thoſe that are done with the Water of ♄. There's alſo another way, by which the ſuperfluous burning ſulphur of ♀ may be waſhed, and ſhe cleanſed without the water of ♄ or of the Flints, *viz.* with *Salt-Petre*. If ♀ or any other imperfect metal be often mixt therewith and burnt, the purer parts come together, and the combuſtible parts come together, and the combuſtible ſulphur ſeparates in the form of *Scoria*. To conclude, This ſeparation and waſhing may be done by the help of other fixed Salts, but none ſo good as the Water of ♄. Now let the Reader know, that thoſe things ſpoken in a rude ſtile, concerning ♀, want not their weight, even as the following Chapters will openly declare.

The Fifth Rule.

Of the Nature and Virtue of Saturn.

THUS *ſpeaks* Saturn *of himſelf: The other Six Planets have excluded and thruſt me out, who am their Examinator, from the ſpiritual City, aſſigning me an habitation with a corruptible body; for what they neither are, nor will be, I am conſtrained to be: My ſix Brethren are Spiritual, wherefore as often as I am in the fire, they paſs through my body, and both I and they periſh together in the Fire, the two beſt excepted,* ☉ *and* ☽, *who are moſt neatly and purely waſht in my waters, and wax proud. My Spirit is Water, ſoftning the hard bodies of my Brethren; but my body is addicted to the Earth, whatſoever I lay hold on, is alſo made like the Earth; and is converted into one body. It would not be good that the World ſhould know what is in me, or what I could do; it would be better did they but know how to get that thing which is mine, and is in my faculty, they would lay aſide all other Arts of* Alchymy, *and handle this thing only, which I am able to perfect. The Stone of Coldneſs is in me; this is the Water by which I cauſe the Spirits of the ſix other Metals to congeal into the Corporeity of the Seventh, that is to promote* ☉ *with* ☽. Antimony *is twofold, the one ſort is the common black* ♂, *wherewith* ☉ *being mixt and melted, is purged; this is of neareſt kin to Lead; the other is white* Magneſia, Biſmuth, *and neareſt to Tin; being mixt with the other* ♂, *it encreaſeth* ☽.

Glaub.] Here we have mention made of *Saturn*, from whence the Bath (ſpoken of afore) for ♀ and

the other metals is prepared, and that twofold, the common and ♁, both which I have mentioned in my former Tracts, as profitable for this washing; but one is fitter for some metals than the other. *Venus* willingly enters into ♄, and may most rightly be washed and separated (geſcheidet) with the common Saturnine water, ♂ and ♃ will not; but ♁ receives them most greedily, holds and washeth them, which is impossible for the common ♄ to do. Yet notwithstanding *Paracelsus* seems to hint at some other thing here, speaking of the transmutation of ♄ with other metals, aiming (as I conjecture) as well at an universal as a particular transmutation of Metals by Saturn. Now Saturn also, as he is the water and washing of other metals, so may he himself be washed with Salts, which, as I shall anon declare, are his water.

But let no body wonder that I speak no larger of the nature and virtue of Saturn, whom I set so high an esteem upon; for it hath been most frequently mentioned, and after this will be; so 'tis not fit so often to repeat the same thing, one Chapter illustrates another. See such other small Tracts as I have written of Saturn, and compare them well together, and without doubt you will perceive my meaning. That which *Paracelsus* adds concerning the difference of ♁ is plain enough, and wants no illustration; for common Lead and ♁ (although much differing in the diversity of Sulphurs) was by the Philosophers called Black Lead. Bismuth, ashy Lead, and Tin, among the ancient Metallurgists, is white Lead; which appellations we shall leave to the ancients, and say no more thereof.

The Sixth Rule.

Of the Moon, *and her Nature and Property.*

IF any one goes about to reduce ☽ into ♄ or ♂, it will be as difficult as to make ☽ (with great profit) out of ☿, ♃, ♂, ♀, or ♄. But 'tis not expedient to make vile things out of good, but to make precious things out of base and abject things.

'Tis also fit to know of what matter the Moon is, and whence 'tis risen; he that is ignorant of this, will find it impossible to make Luna.

Quest. *What therefore is* Luna?

Answ. *It is the seventh external, corporeal, material, of the Six metals therein hidden; for always (as it hath been very often said) the Seventh hath the other Six spiritually hidden within it self; neither also can these six be without an external, material metal; nor can any corporeal Metal be without the six spiritual ones and their Essence. If you melt the seven Corporeal Metals, it doth nothing as to making ☉: after mixtion, each as its nature is, remains fixt in the fire, or volatile. For example, mix as well as you can ☿, ♃, ♄, ♂, ♀, ☉ and ☽, it will not therefore follow, that the ☉ and ☽ will transmute the other five, that they become ☉ and ☽: Although they are blown together into one mass, yet each remains in its own state,* viz. *if you take of the corporeal mixtion; for transmutation consists in the spiritual mixtion and union of Metals, because Spirits admit of no separation and mortification.*

Although you kill the Body an hundred times, yet will they always have another Body more noble than the former. And this is the promotion of Metals from one mortification into another; that is, from a more ignoble degree to a higher, that is Luna, *and from a better to the best, that is* Sol; *a most illustrious and royal Metal; 'tis also true, and always will be, which hath been often spoken of before, that always the six metals generate the seventh, and deliver it from themselves into a palpable and visible substance.*

Quest. *Now, then if it be so, that the* Luna, *or any other metal, is always caused and produced from the other six, What therefore is its Property and Nature?* I answer, *Out of ☿, ♃, ♂, ♀, ♄, and ☉, no other metal can be made, but ☽; the reason is, because as to the other six metals, each are indued with two good virtues, which in all make Twelve: these virtues are the Silverish or Lunar Spirit, which in brief understand thus; Silver is compounded into a corporeal Metal, out of the six Spiritual Metals, and their Properties, in number twelve, and is likened to the seven Planets, and the twelve Cœlestial Signs; for the ☽ hath from ☿ the Planet, and ♒, and ♓, a bright white flux and splendor, ☿, ♒, ♓; also ☽ hath from ♃, ♂, and ♁, a white colour, a great constancy against the fire and fixation, ♃, ♂, ♁; from ♂, ♑, and ♈, it hath hardness, and a good clangour or sound, ♂, ♑, ♈; from ♀, ♊, ♎, it hath the means of Coagulation and Malleability, ♀, ♊, ♎; from ♄, ♍, ♏, it hath a fixt body with heaviness and gravity, ♄, ♍, ♏; from ☉, ♌, ♐, it hath a sincere purity, and a great constancy, against the violency of the fire, ☉, ♌, ♐.*

Thus is briefly explained what is the exaltation and cause of the spirit and body of Silver, with its own compound Nature and Essence.

It must also be known what matter the metallick spirits do take in their first Nativity, when they are carried down into the Earth from the Cœlestial Influences, viz. *a vile Dirt or Stone, which the Mine-digger by breaking the body of the metal, destroys and burns in the fire, in which mortification the metalline spirit assumes another body, not fryable, but pure and malleable. Then the Alchymist coming, destroys this metalline body, kills and prepares it by Art, but that metallick corporeal Spirit makes apparently conspicuous, another more noble and much more perfect body, whether it be the Sun or Moon; then both the metallick Spirit and Body being perfectly united, are free and safe from Corruption by the Element of Fire.*

Glaub.] *Paracelsus* in this Sixth Chapter repeats the words which have been oftentimes afore mentioned, *viz.* That every visible metal is an hider of the other metals which lie spiritually hid within it; withal teaching, that it is impossible for corporeal metals, although melted together never so long, to be meliorated, unless they are first made spiritual; which I have oftentimes demonstrated and shewed to be the very Truth, and the right way to Transmutation.

But he doth not in expres words teach the way by which they may be made and rendered Spiritual; nor is it convenient to chew a Morsel, and thrust it into the mouths of the Ignorant.

Now I say, that as touching the spiritualizing of Metals, *Paracelsus* doth not advise that Metals be dissolved in corrosive Spirits, & digested & destilled over the Helm with it, by often Cohobations. The Spiritualization which he mentions here, is not to be done with Corrosives, for they are rather corrupted by them than perfected, neither in Glasses, but in Crucibles, and that in a few hours, without Corrosives, whereby they are so depurated, and as it were poudered, that they are transparent in and out of the fire, and dissolvable in any water. This is a true

Spi-

ſpiritualization of metals, and gainful if it hath the ſaid Properties: 'Tis otherwiſe called by the Philoſophers, the firſt matter of Metals, and at this time known but to few.

Our Laborators now adays know not any metallick ſpirits, but ſuch, as by the help of peregrine and noxious things, they drive over by an Alembick or Retort; but Experience teſtifies, that theſe are wholly uſeleſs and unprofitable for Melioration. And although the ancient Philoſophers write, Make the fixt volatile, and the volatile fixt, yet they mean not that the metals ſhould be deſtilled. Which ſublimation or deſtillation they did not meddle with, but all their metallick labours, as *Solution*, *Putrefaction*, *Deſtillation*, *Sublimation*, *Calcination*, *Inceration*, *Cohobation*, and *Fixation*, were done in one earthen veſſel, without Corroſives; nor did they weary themſelves with thoſe ridiculous labours that are done by the means of Glaſſes. But of this more in another place.

Now read diligently over and over again what *Paracelſus* writes at the end of the Chapter, and it will appear, that he ſpeaks of fuſion, and not deſtillation in Glaſſes; where he ſhews, that a metallick ſpirit at its firſt deſcending from the ſtars into the earth, hath a moſt vile form, like a ſtone, or dirt, which the digger of it melts with a ſtrong fire, whereby it gets a better form, and becomes a malleable metal. And here he is at a ſtand, and cannot proceed any farther. Now, ſaith *Paracelſus*, the Alchymiſt comes and takes this metal, and by his Art deſtroies the metallick body, killing and preparing it; and by his labour it aſſumes a more noble and fixt body, called (becauſe of its maturity) Gold or Silver. The ☽, although it be more pure and excellent than ♀, ♂, ♃, and ♄, yet having not arrived to maturity, it is (in compariſon of the ☉) like a flower, which is more excellent than the herb, but inferiour to the ſeed, which is the moſt perfect part of the ſame. And, as in Vegetables the flowers are indued with a more elegant colour than either the ſeed or fruit: So alſo is the ☽ more abounding with Tincture than the ☉; which I have very often tried, and could demonſtrate by many Examples; contrariwiſe, altho' the flower be, as to the form, colour and odour, above the ſeed, yet in goodneſs and durability it is much inferiour; for the flower at an approaching cold falls away; but the ſeed endures, and if it be helped, it produceth a new herb, flowers, and ſeed, by which its ſpecies are conſerved and propagated. And as in Vegetables the herb is the greateſt part, the flowers leſs, and the ſeeds leaſt, ſo in Minerals is the like order moſt fitly obſerved: for ſhould Nature produce only Flowers and Seeds with the Herb, whence would there be Graſs for Beaſts, whereby they might fill their Bellies, and ſo yield dung for the Country-man to dung his ground withal, that it might produce a new Crop of Herbs. Without doubt there's more Tincture hidden in ☽ than in ☉, the inmoſt part of which is a meer redneſs; but the centre of ☉ is a moſt fixt and ſplendid Sky-colour, which is to be well obſerved. As for the other Properties of ☽, which are moſt frequently known, 'tis needleſs to mention them; as to purity and fixation, 'tis neareſt to ☉, and therefore in metallick things 'tis to be likened to a Flower: 'Tis plainly void of combuſtible and preying Sulphur; but being not as yet arrived and concocted to perfection, it is a moſt ſuitable Vehicle to extract ☉ out of volatile and unripe Marcaſites, and other auriferous Minerals, and to make it corporeal. Concerning which I have formerly written, and will write more hereafter.

The Seventh Rule.

Of the Sun, *its Nature and Property.*

COrporeal ☉ is the ſeventh Metal of the ſix ſpiritual ones; in it ſelf it is a meer Fire; but the Reaſon of its being outwardly of an elegant, yellow, viſible, ſenſible, ponderous, cold and malleable body, is, becauſe it hath in it the coagulation of the other ſix metals, whereby 'tis compell'd into a viſible body. And as to its being melted with Elemental fire, 'tis from hence, becauſe it hath a fluidity of Mercury, ☿, and ♒, ſpiritually hidden in it ſelf; the which is alſo outwardly evident, becauſe it is moſt eaſily mixt with the ☉, and detained by him.

And whereas after melting, it grows hard by the Cold, viz. *is coagulated, and grows ſtiff, that comes from the other five metals, ♅, ♄, ♂, ♀, and ☽; in theſe five metals the Cold dwells and bears ſway, and therefore ☉ cannot be fluid out of the fire, becauſe of Cold. Nor can ☿ with his heat, nature, and fluidity help him againſt the five cold metals, for its heat ſufficeth not to keep the ☉ in perpetual flux, ſo that it is enforced to obey the other metals rather than one only, ☿, who (as to coagulation of metals) hath nothing to do, its Property being to make liquid, and not hard: It is the work of heat and life to make liquid, but cold is the cauſe of hardneſs, ſtiffneſs, and unmovable, being therefore likened to Death.*

For Example. *If you would reduce the ſix cold metals to fluidity, whether it be ♅, ♀, ♄, ♂, ☽, ☉, it is to be done by the heat of the fire, for metals are not melted with cold Snow or Ice, but are hardened thereby. Now, aſſoon as they are melted by the fire, and that the heat ceaſeth, the cold ruſheth in, whereby the metal ſtands ſtill, grows ſtiff, dies, and remains immovable. And becauſe that ☿ is alwaies fluid and living, tell me, I pray, whether or no ſuch a thing proceeds from heat or cold? Some or other may ſay, it is becauſe of its cold and moiſt nature, and that it is living becauſe of Cold; but whoever ſaith thus, and believes thus, is ignorant of Nature, and deceived and ſeduced with the vulgar, whoſe belief of any thing is out of the right way, & amiſs, & are therefore to be avoided and ſhun'd by him that would truly know; for ☿ is not living, by reaſon of cold, but becauſe of its heat and fiery nature, as all things elſe live becauſe of heat, for heat is the cauſe of life, and cold the cauſe of death.*

But that ☉ is in it ſelf a meer Fire, not alive indeed, but hard, ſhewing its fiery heat only outwardly, as yellow mixt with red, and the other five metals, are cold, viz. *♅, ♂, ♄, ♀, and ☽, giving their virtues to the ☉,* viz. *according to their frigidity a body, by their fire colours, by their ſiccity hardneſs, by their moiſture weight or heavineſs, by their reſplendancy ſound; and that it is not combuſtible, and to be deſtroyed by the Element of Terreſtrial Fire, that is by reaſon of its fixedneſs. Fire doth not burn Fire, nor deſtroy it, but Fire joined to Fire becomes the greater and more powerful in ſtrength. The Cœleſtial fire deſcending from the ☉ upon Terreſtrials, is not ſuch a fire as is in Heaven, nor ſuch as our fire is on Earth; but with us the Cœleſtial fire is cold, a rigid and congealed fire; and this is the body of Gold, and therefore we cannot tame or maſter ☉ with our fire, we can only divide it and melt it, as the ſun diſſolves and melts ſnow, congealed ice and water. Wherefore it is not permitted for one fire to deſtroy another, becauſe ☉ it ſelf is fire, and in Heaven it is reſolved, but with us it is coagulated.*

Gold is in a threefold ſtate with its Eſſence.

1. *The Cœleſtial*	*is*	*Reſolved.*
2. *The Elemental*		*Liquid.*
3. *The Metallick*		*Corporeal.*

The End of the Seven Rules.

Glaub. WE are now come to ☉, a kingly and moſt excellent Metal, the which *Paracelſus* compares to a meer abſolute Fire, and ſo 'tis found to be, if it be ſeparated into parts; 'tis likewiſe endued with a ſeed-like nature, more hot than the Herb it ſelf or the Flower. But to what end ſhould we write of bettering it, when as it needs it not, being already conſtituted in the higheſt degree of perfection, and Nature not being able to promote it to an higher degree: Now then if it be to be made better, 'tis behoveful to make it Medicine, for never was a more excellent metal than it ſeen. An Herb planted in a fruitful ſoil, and brought to its perfection by the heat of the Sun, the ſeed being ripe, it remains not in the ſame form, but withers, and the ſeed falls away; but if it be ſeaſonably gathered, it laſts a long while, and may, at your pleaſure, be put into the Earth, for the production of new Herbs of its kind; or elſe it may be uſed for the health of Mankind, having no other notable Uſe beſides. In like manner, Gold having arrived to its perfection, if it be to be farther advanced, it muſt be made Medicine, or be put upon the Metallick Earth, as Seed is on the Common Earth; where putrefying or augmenting, or growing, it may exhibit and produce a metalline Off-ſpring. Every body knows that a good Medicine may be thence made, and that various waies, but few know the manner how; but that 'tis able (like the Vegetable ſeed) to make Encreaſe out of the imperfect metals (being its own Earth) *Paracelſus* teacheth in this place, and many Philoſophers witneſs the ſame, which is not only true in a particular melioration, where by attracting its like out of the imperfect metals, it is encreaſed; but 'tis alſo to be believed as true, that from it may be ſeparated, by the induſtry of a skilful metallick Philoſopher, its inmoſt Vegetative power and pureſt portion (all its husks, or outſide, wherewith 'tis cloathed, being laid aſide) and may thereby be exalted to a more than perfect eſtate, although 'tis incredible to many, yet 'tis not in the leaſt to be doubted of, except we would make all the Philoſophers to be Lyers.

As for my ſelf, although I never ſet my hand to ſo hard a Task, yet I believe and affirm it to be in the nature of things, as having evidently obſerved by my other metallick Labours, that this Medicine is in the poſſibility of Art; the which I will alſo in due time ſet upon, if God give Life and Leiſure. What the other properties of ☉ are, and by what means good Medicines may be prepared therefrom, I have ſpoken thereof in many places of my writings, and in its proper place more alſo ſhall be ſpoken. And here we reſt and conclude this little Book of the Rules of the Seven Metals.

GOD and Nature make nothing in vain.

THe Eternal City of all things (there's an Eternal place in all things) without time, without beginning, and without end, is every where eſſentially. It operates in that wherein is no hopes, and that which is accounted impoſſible, unexpected, incredible, and plainly deplorable, will be true even to admiration.

Glaub. *Paracelſus* having finiſhed his Seven Rules of the Properties of Metals, begins after a ſort, to repeat and illuſtrate his ſentiment or opinion, comforting the Operator, leſt happily he ſhould be diſcouraged, if his affairs do not preſently meet with good ſucceſs; but let him ingeniouſly proceed, becauſe *Nature makes nothing in vain*; that which is leaſt of all believed, comes moſt of all to paſs; his words are clear enough of themſelves.

Item. *Note now ſome things on* Argent Vive.

Whatſoever whitens is of the Nature of Life, and of the Property and Virtue of Light, which cauſeth and makes Life. The Fire with its heat gives birth to this motion. And whatſoever blackens, is of the Nature of Death, of the Property and Virtue of Darkneſs, (having the efficacy and force thereof) which cauſeth Death; to the which hardening or induration the Earth with its Cold is the coagulation and fixation. The Houſe is alwaies dead, but the Inhabitant is a living Fire: If thou haſt found out the true Uſe of Examples, thou haſt overcome.

Glaub. *Paracelſus* ſpeaking here of Mercury, mentions Fire, which by its heat is the cauſe of Light and Life, but that which blackens, is the cauſe of Death; where making as it were a pauſe or ſtand, he adds theſe pregnant words.

Sacrifice the fat Vervein (or Sulphur). ℞ *eight lots of Salt Nitre, four lots of Sulphur, two lots of Tartar, mix them, and let them flow.*

Glaub. Here begin the Complaints of the Alchymiſts, becauſe *Paracelſus* writing of ſo good a matter, doth ſo ſuddenly break off, adding ſuch a Receipt, as in their judgment hath no affinity with Mercury, but is to him as a thorn in a man's eye. This powder indeed is a good fuſile powder, for the reduction of ſuch metals as are otherwiſe hard to melt; but in this place 'tis meerly vain and needleſs, becauſe ☿ by his innate fiery power and heat, doth alwaies flow; wherefore we want not this Flux for him. Had he written in this place, how he (*viz.* ☿) is to be coagulated and fixed, we would moſt willingly have heard him, and as willingly have been content that he had kept his fluxing powder to himſelf.

Such as theſe ought to blame themſelves and not *Paracelſus*, that wiſh'd well unto them. The words which went juſt before, may excuſe him; for he ſaid, that *GOD and Nature made nothing in vain*; whereby he intimates, that this powder is not ſo ſtrangely to be look'd on, as if it did not pertain to ☿, who is more than enough fuſile already, and wants it not. Nor was this mentioned to vex the Alchymiſt; no, *Paracelſus* knew this nimble fuſile powder, and its operations upon the metals, better than he that complains thereof, ('tis of incredible benefit in the metals, did any one know how to uſe it) and he placed it here, that we might perfectly learn its higheſt force and efficacy upon the metals;

tals; the which thing his foregoing words do alſo admoniſh us of: It operates beyond hope, that which is judged impoſſible is unexpected, incredible, and deſperate, will prove true to admiration. Wherefore, think you, would he have added this fire had it not been needful in this place? doubtleſs he knew how to burn the wings of ☿, and thereby to ſtay his flight. And although I know not how to fix ☿ herewith, yet have I experienced wonderous things as well in the metals as ☿, for if the metals, eſpecially ☿, be Philoſophically joined herewith, ſublimed and deſtilled, they afford wonderful *Menſtruums.*

It's alſo here ſaid, *Sacrifice the fat Vervein* (or Sulphur). 'Tis full well known, that the ſuperfluous Sulphur in metals that are imperfect, is the cauſe of their baſeneſs, and this fire is able to burn it up, but 'tis impoſſible that all ſhould know it; there's need of uſe and diligence, if you deſire *Icarus*, flying with his Father *Dædalus*, and approaching too nigh the Sun (whereby his wings being burnt, he tumbled down into the Sea) ſhould be drowned in the waters. The which let ſuffice, for there's enough ſpoken unto a wiſe man; let us therefore proceed.

What is to be determined concerning the Coagulation of ☿.

'Tis not at all expedient to kill ☿, *to coagulate him, and then reduce him into* ☽, *and to weary him with many ſublimations and other things, for this is but the deſtruction of the Sun and Moon that is in him. There's another more compendious way, whereby* ☿ *is made* ☽, *of ſmall coſt and charge, without any labour of coagulation: Every man reads in the Writings of the Alchymiſts, ſuch Arts as are mean and vile, and eaſily preparable, whereby in a ſhort time he might make abundance of* ☉ *and* ☽, *and are tired and vexed with the Writings of ſuch as do not teach them clearly and plainly, and would willingly hear this,* viz. *Do ſo and ſo, and thou ſhalt have good* ☽ *and* ☉ *to inrich thee.*

But good Sir ſtay a while, and wait till the Secret be plainly opened to thee in poſitive words without any labour; ſo as to enable thee (in as 'twere a moment of time) to take ♄, ☿, and ♃, and make *Sol* and *Luna* thereof. The Art will never be ſo eaſily known, how ſhort and facile ſoever it be in it ſelf.

Glaub.] *Paracelſus* goes on, and ſaith, That 'tis not needful to coagulate ☿, that ☉ and ☽ may be thence made, and that it is to be done with a moſt eaſie labour, and therefore few words are beſt. And here *Paracelſus* is to be compared to that Rich man, who having heard that many periſhed with famine, 'tis ſaid that he ſhould anſwer, That before he would be tormented with hunger, he would rather feed on ruſty Bacon and Peaſe, believing that all abounded with this fare; the which they deſpiſing by reaſon of their daintineſs, deſervedly periſhed. In like manner the good *Paracelſus* believed, that all Chymiſts were his equals, as to the knowledge of Metals, not dreaming of the many poor Colliers that torment ☿ by their ſolutions, precipitations, ſublimations, reſuſcitations, fixations, and other labours; when as they are ignorant of what it is, what abounds or is wanting therein, and ſo for want of knowledge, toil and labour to no purpoſe: ☿ is a ſubject of wonder, and is frequently wont to deceive the Alchymiſts, whom (*viz.* ☿) if you would on the other ſide deceive, when you purſue him, give him a little breathing (becauſe by force he's not to be compell'd) that he may a little wander about, but truſt him not too much, leſt flying away, he leaves behind him an empty Neſt. For which Work the firſt Furnace, with its many Glaſſes, very well fitted and united, will ſerve excellently well. But in few words, 'Tis a ſubject of an inexhauſtible wonder, the which I alwaies found the moſt ſtubborn of all the metals, that I have beſtowed grievous pains about; but yet do believe, that he that knows rightly to deal with him, will reap a benefit from him not to be contemned. But who is there that diſcovers the Way? Wonders muſt alwaies remain unknown unto us, and albeit we know not all things, yet let us acknowledge the great Mercy of GOD, and give Thanks to Him for that which we do know.

The Receipts of Alchymy.

WHat ſhall we ſay of the many Receipts and the various Veſſels, ſuch as are the Furnaces, Glaſſes, Teſts, Waters, Oils, Salts, Sulphurs, Antimonia, Magneſia, Salt Nitre, Alume, Vitriol, Tartar, Borax, Atramentum or Copperas, Orpiment, Spume of Glaſs, Arſenick, Calaminaris, Bole-Armoniack, *Vermilion, Calx, Pitch, Wax, Lute of Wiſdom, Powder'd Glaſs, Verdigreaſe,* Salt Armoniack, *Soot, Roſin of the Pitch-tree, Chalk, Mans-fat, Hairs, Egg-ſhells,* Lac Virginis, Ceruſe, Minium, Cinnabar, Vinegar, Aqua-fortis, Crocus Martis, Elixir, Lazure, (ultro-Marine) *Soap, Tutia,* Havergold, *Cryſtals. What likewiſe ſhall we ſay to their preparations, putrefactions, digeſtions, probations, ſublimations, calcinations, ſolutions, cementations, fixations, reverberations, coagulations, graduations, rectifications, amalgamations, and purgations. Moſt Books are fully ſtufft with theſe Alchymical things, as alſo what things are to be done by the benefit of Herbs, Roots, Seeds, Woods, Stones, Animals, Worms, Bone-Aſhes, Cockle-ſhells, Muſcles,* &c.

All theſe things are the Labyrinths of Alchymy, *and are great and but vain Labours. Moreover, although* ☉ *and* ☽ *might be made by the means of theſe things, yet by reaſon of the multitudes of them, the Work is rather hindred than advanced; and therefore it cannot be truly learned from the aforeſaid things, how to make* ☉ *and* ☽. *But all ſuch things are to be omitted, as operate not with the five imperfect Metals, for the production of* ☉ *and* ☽.

What therefore is the true Way, and the ſhort Path void of all difficulties, that leads to the ſpeedy making of good Sol *and* Luna? *How long will it be ere thou revealeſt it? I believe that thou underſtandeſt nothing of this matter, may ſomebody ſay, but doſt only mock us with theſe Riddles.* For anſwer: *It hath been already ſpoken of, and is evidently enough diſcovered in the Seven Rules; He that underſtands not, let him blame himſelf. Beſides, let no body be ſo mad, as to perſwade himſelf, that the Art is moſt eaſie to be underſtood, and to be perfectly known by the vulgar; that is neither ſo, nor muſt it ſo be; but it will be better underſtood in an occult and hidden Sence.*

This is the Art, viz. *If you make the Heaven or Sphere of* ♄ *to flow with life in the Earth, put in all the Planets, or which you pleaſe of them, but let there be of* Luna *leaſt of all; let it flow ſo long, until the Heaven of* ♄ *doth wholly diſappear, and the Planets remain alone dead with their own corruptible Bodies, and have aſſumed a new, perfect, uncorruptible body, that*

body is the Spirit of Heaven, by which the Planets become again corporeal and alive; as afore, Take out that new Body from the Life, and out of the Earth, and keep it, for it is Sol *and* Luna. *And thus haſt thou the Art plainly uncovered and intire; if thou doſt not yet underſtand and apprehend it, 'tis well, for ſo it muſt be; nor muſt it be publickly divulged.*

Glaub.] In this Chapter *Paracelſus* teacheth, That there's no need of ſo many ridiculous ſpecies, for the tranſmutation of Metals, but that there's virtue enough in the metals to operate upon, and to better one another, if they are rightly conjoined amongſt themſelves; yet in ſome Labours we cannot be without Salts and Minerals, becauſe they are uſeful to mollifie hard Metals, and to diſpoſe them to aſſume a melioration. But 'tis to be obſerved, that Corroſives are to be omitted, and ſuch Salts only to be uſed as are friendly to Metals. Likewiſe other Minerals and Foſſiles may be fruitfully uſed in fuſion, (Seigerung) ſeparation, and other metalline Operations, as additaments (als Suſans). The which thing *Paracelſus* denies not, but only rejects, and that deſervedly, thoſe ridiculous Compoſitions of the unskilful Alchymiſts, which they making in their uſe Sol. He dehorts the ſtudious Artiſt, and endeavours to bring him into the right way.

Furthermore, he teacheth but in an occult ſence, how good *Sol* and *Luna*, ſuch as will endure all trials, is to be extracted out of imperfect Metals; but 'tis ſo obſcurely done, that no body can thereby underſtand the thing; and ſuch only as aforehand know ſomewhat, and have had the like Labours under their hands, are able to underſtand his meaning.

Doubtleſs this Proceſs hath found many an one work enough, who have at laſt attained to nothing; but yet ſome have by chance lighted thereon, and ſo perceived the Truth of his Words, moſt of which Inventions do caſually happen; and whilſt that one thing is ſought after, and by accident loſt, ſomething is oftentimes found more excellent than that which was intended.

In like manner, moſt things unſought after have happened to me; and alſo my Labours have manifeſted to me the greateſt part of *Paracelſus*'s Arts, and not his Writings. And who will certainly and plainly teach what lies under that Covering? Many Archers there are, but few hit the mark. Neither ſeems it ſo neceſſary to take nothing elſe but the aforeſaid Metals; the which thing *Paracelſus* alſo in his forementioned Proceſs doth hint at, ſaying, When thou makeſt the Heaven, or Sphere of ♄, to flow with Life in the Earth, ſow in all the Planets, or ſuch as you pleaſe of them; but let not the Moons part be biggeſt, but let it be the leaſt of all. By which words 'tis eaſily conjectured, that the greateſt part muſt be of Saturn, whereby the other metals are to be waſhed and purified, and the leaſt part of the Moon. But ſome body may ask, What reaſon is there for the Moon being here, ſhe being already pure, for the waſhing of whom there's no need? Why this hath been already elſewhere anſwered thus, *viz.* That ſhe may attract, defend, and make corporeal, the waſhed, purified, and tender Sun, which would otherwiſe remain in the *Scoria*: Notwithſtanding this ſeparation may be made without the *Luna*, but then 'tis not ſo gainful. Neither alſo is it neceſſary to conjoin the Metals, and ſo make but one work in waſhing them with Saturn; each of them may be taken apart, and ſo cleanſed, unleſs a man knew how to contrive the compoſition, then indeed the Work would be facilitated, and more Sol gotten; the which is to be well obſerved, if either none, or very little Luna be taken. But if you take not ☽, then ♀ is to be added, as being of neareſt affinity to ☉ and ☽, in its malleability, and ſo that will attract the volatile and immature ☉ out of the imperfect Metals, and defend it in the fire, but much weaker than ☽. Tin and Iron being moſt impure and ſharp metals, may be waſhed with Lead, but with much difficulty, and may be deprived of their ſpiritual and occult ☉, but with far greater charges and coſt, than if you took in ☽, or at leaſt wiſe ♀. Now knowing this, Why do we not give to every one its proper additament, for the expedition and enriching of the Operation? 'Tis worth the while to be able to make a good mixtion of Metals, and with profit to waſh them with ♄, in which mixture none believes how much there's placed, nor my ſelf neither, had I not with Loſs learned the ſame. For, when in former years I ſought after ſomewhat in this kind of operation, as waſhing and ſeparation, and had ſometimes found out a good *Proba*; I have gone to repeat the ſame labour again, and have egregiouſly erred. And although I have for many years wrought hard in this kind of labour, and ſpent much (which I repent not of) yet I dare not boaſt of catching the beſt prey, but am content with a piece of Bread, but yet I do not diſpair, *Good things come ſlowly on,* and the thorny prickly Budds ſpring forth before the Roſes come. Now, if thou learneſt the weights the Work will be ſafe, and thou needeſt not to doubt of doing the ſame in a great quantity. *Paracelſus* goes on, and bids you to let the Planets which you have put in, to flow ſo long with the Heaven of ♄, until the Heaven of ♄ vaniſh, the Planets will remain, having received a new body, which is to be taken out of the Life and the Earth, which will be ☉ and ☽. And theſe words are variouſly interpreted by ſundry men, eſpecially what the Heaven of ♄ is, and are perſwaded, that if that were known, the reſidue of the Proceſs they could ſtate well enough. Many underſtand hereby the common ſeparation made by a peculiar ♄, taking the *Regulus* Stellate of ♂, which is ſtampt with a Cœleſtial Star, the which they blow on and melt with the Life, (which they interpret to be the fire) in the Earth (a Cupel or Teſt treibſcherben) the bodies being left upon the Teſt, like mortified Metals, the which reducing by a fuſing addition, and melting with Lead, (angeſotten) and promiſing themſelves Gold and Silver, they find themſelves to be in an errour, and accuſe *Paracelſus* of Sophiſtry and Deceit, becauſe they can't make good quantities of ☉ and ☽, by means of his Writings.

And now, what this Sphere of Saturn is, may be variouſly explained: It may not unfitly be taken for common ♄, becauſe being fuſed, it ſhines, and is turned round: or it may be taken for its Glaſs, which being melted in the fire, ſhines like the Sun: or it may be the Stellar *Regulus* of ♂, becauſe its *Stria* repreſents Stars when 'tis broken. But what benefit is it to know the Heaven of ♄ and to be ignorant of the true requiſite Life, and the reduction of the dead and reducible bodies. Common Fire is not the Life that *Paracelſus* mentions, but it may be ſtirred up thereby; and ſo he ſaith; The fire with its heat, is the Nativity to this motion: If by the Elemental Fire he ſhould mean the Life, and by the ſeparation of ♄, or blowing of the *Regulus* of ♂, (the flow-

flowing which *Paracelſus* mentions) then it muſt neceſſarily follow, that the deſtroyed bodies which remain, ſhould be made more perfect, and the Spirit of Heaven ſhould yet remain with them; for thus he writes, *viz.* The Planets by it do become corporeal and living, as they were before; but in theſe kind of ſeparation, ſcorification, or blowing off, it is not found ſo to be; but in theſe Operations their Bodies remain like *Scoria*, in which is neither ſpirit or life, much leſs ☉ and ☽ to be found, though never ſo diligently ſought after. *Paracelſus* ſaith expreſly, *viz.* That Body (*viz*, of the ſlain or kill'd bodies) is the Spirit of Heaven, by which the Planets do again become corporeal and alive as before; from whence 'tis to be underſtood, that thoſe bodies are ſpiritual, & not only corporeal and reſuſcitated, but ſuch as may give life even to ſlain or deſtroyed bodies, the which can't be ſaid of them, for a ſpirit muſt be penetrative and vivifying, and they are not ſuch. For if (according to *Paracelſus*'s mind) the dead bodies ought to be reduced to Corporality and Life, 'tis neceſſary that they have ſome hidden power; (which every one knows not) whereby they may demonſtrate moſt ſpeedily their embodying and vivification in a ſpiritual manner, without the addition of any peregrine Flux, or elſe they are deſervedly to be rejected. But if any one ſhould now imagine, that metals being by the red fire deprived of life, made ſpiritual and again corporeal and living, ſhould forthwith be all ☉ and ☽; he promiſeth more to himſelf than is right, and is deceived (for *Paracelſus* ſaith, that That new body is to be taken out of the Life and Earth and kept, for 'tis ☉ and ☽) for 'tis impoſſible even for the Philoſophers Stone, to convert the whole bodies of Metals into ☉ and ☽, for out of nothing, nothing can be made, as the Philoſophers ſay; and Experience teſtifies, none but God only made any thing out of nothing; but that thing which is, may by Art be reduced into nothing, and that again reduced into ſomething. Seeing therefore that the greateſt part of metal is an unprofitable, combuſtible noxious Sulphur, which never was a metal, but adhering only outwardly unto them, and being combuſt, reduceth their *humidium Radicale* into *Scoria*; which *Humidum Radicale* only (after its deſtruction) and not the whole maſs of Metal or ſuperfluous Sulphur, is reduced by the ſpirit of the Saturnine Heaven, out of nothing unto ſomething, *viz.* a Body and Life; the Sulphur which before the corruption was nothing, remains ſtill a Nothing; and if thou throughly obſerve the thing, the Caſe ſtands clearly thus; *viz.* If in this operation there muſt be a ſeparation of the imperfect metals, and a gathering together of the more pure, and a diſperſing of the more impure parts; theſe ſeparated parts muſt therefore neceſſarily be much unlike one another; and by how much ☉ and ☽ is more pure, if compared with imperfect metals, from which 'tis ſeparated: And theſe ſeparated parts are not of the ſame Goodneſs and Nature; as if ten duckets were divided into two parts, each part would have 5 of the ſame goodneſs and weight. Now, if from one of theſe halfs you take two or three parts, and put them to the other half, it only makes the one bigger, and the other leſs: And if there be nine parts on the one ſide, and but one left on the other ſide, yet cannot the major part boaſt of its excelling the other in quality, but only in quantity: As to Goodneſs, they are both equal. But now, if you take a Mineral or Metal commixt with ſtones, and by meaſure divide it into two equal parts, and then pound them, and by pouring water thereon, ſeparate the lighter parts after the accuſtomed manner, and the heavy Metal will ſettle to the bottom: Now the droſs and metal will fill the former meaſure, but will very much differ in their goodneſs.

Or if any one take two meaſures of Wine, and by the heat of Fire, ſeparate the more excellent Spirit by deſtilling in a Glaſs Alembick, and leave the other meaſure in the Cucurbit: Theſe two parts, though equal in quantity, yet they do much differ in goodneſs; the one part will be more noble than Wine, and the other worſer; and as the other reſidence is no more Wine, being deprived of Spirit, Life, Soul, and Strength, and is thereby unable to defend it ſelf from death, but tends to putrefaction; ſo on the other hand, the Spirit is not ſubject to putrefaction, but preſerves other things therefrom.

The like is to be underſtood of this metalline ſeparation, for the remainder, from which ☉ is ſeparated, can no more be made Tin, Copper, or Iron, but is a groſs earthy Sulphur, by the reaſon of the ☉ taken thence; whereas before it was ♃, ♀, ♂, or ♄. And by how much the Spirit of Wine is more excellent than common Wine, and ☉ than an imperfect Metal, by ſo much alſo will the Spirit of Wine and ☉ excel, if they are again ſeparated, and new fæces ſegregated therefrom. But this is not ſo neceſſary in this place; 'tis ſufficient to have declared the way and reaſon of this metalline ſeparation, about which we have even now treated, *viz.* That the whole metal, nor the ½ or ¼ part thereof, will become *Sol*, and the reſt remain a metal; but the ſeparation of the pure is very ſmall in quantity, in compariſon of the much impurity whence 'tis ſeparated. Nor let any one think he hath not attained the Art, and ſo will not reſt here, if all things become not ☉; 'tis ſufficient if there be ſome gotten, and that all the Labour is not beſtowed in vain.

By what means Cryſtals are to be Conjured, and all things to be ſeen in them.

TO Conjure is no other thing, than well to obſerve a thing, to know and underſtand what it is: Cryſtal is a Figure of the Air, in which is to be ſeen whatſoever is moveable in the air or unmoveable. The like appears in a Looking-glaſs, in Cryſtal, and in the Waters, for the Air, Water, and Cryſtals, are all one to Sight; like a Glaſs wherein an Object is to be ſeen, as it were, reverted.

Glaub.] I do not fully know what *Paracelſus* intends by this Conjuration of Cryſtals, becauſe it appertains not to the metalline Arts; but yet it ſeems not to be here added without good reaſon, ſomewhat he would intimate hereby. We read of the Ancient *Pagan* Philoſophers, that they conjured Cryſtals, and beheld in them many wonderful things; the which, whether it be true or no, I leave as I find it, becauſe in my Judgment, ſuch an Art ſeems not natural, but belongs to Diabolical Magick, which I have nothing to do with.

Paracelſus alſo hath elſewhere written of wondrous Looking-glaſſes of the ſame, and hath taught how to compoſe them of Metals, melted together in a certain Time and Conſtellation; the which many have attempted to do, but not one (as far as I

know) hath attained the Myſtery. It ſeems very probable, that he intends by this Conjuration of Cryſtals, that the Metals are to be made like to pellucid Cryſtals, Air, or Water, wherein the ſoul of the Metal may ſhine, if you would ſpiritualize them, and make them yield their ☉ and ☽. And in this Sence it agrees with the aforeſaid Chapters.

It likewiſe ſeems, that the mentioning of this thing is neceſſary for the ſake of thoſe, who practiſing on a ſeparation with ♄, have experienced, the Metals are to be firſt reduced into Tranſparent Cryſtals, before they part with their occult *Sol*: Which I have elſewhere ſpoken more largely of, about *Amanſa*, and therefore will here end.

Of the Heat of Mercury.

THey that believe that Mercury *is of a moiſt and cold nature, muſt lay down the Bucklers, for 'tis not ſo, but it abounds with a great heat and moiſture, which being naturally planted therein, keeps it alwaies fluid: For, were it of a cold and moiſt Nature, it would alwaies remain rigid and hard, like to congealed Water, and were to be melted like other metals, by the heat of the fire, which it* (viz. ☿) *hath no need of, becauſe it hath already a fluidity from heat, whereby it flows, and is alwaies conſtrained to live, and not to die, grow ſtiff, congeal, or be fixed. But this is ſingularly to be noted, that the Spirits of the ſeven Metals, or of as many of them as are conjoyned in the Fire, are wonderfully provoked and ſtirred up, and* Mercury *chiefly, and they emit, and ſend out their forces amongſt each other, for a mutual Victory and Tranſmutation; the one takes away the Virtue, Life, and Form from the other, communicating a new Nature and Form; ſo the Spirits or Vapours of Metals are ſtirred up by heat and mutual action and paſſion, and are tranſmuted from one Virtue to another, and at laſt to Perfection and Purity. But what elſe is to be done with* ☿, *that ſo his heat and moiſture being taken away, he may catch a great Cold, and be congealed, ſtand ſtill, and die; do as you hear in the following Figment.*

℞ *a moſt pure Silver Veſſel, in which ſhut up* Mercury, *then fill a Pot with molten Lead, in the midſt of which put in the Veſſel with the* Mercury; *let it flow a whole day, and the hidden heat will be taken away from* Mercury, *and the external heat will communicate to it the internal cold of the Lead and* ☽, *being both of a cold nature, by which* Mercury *will grow ſtiff, rigid, and become hard.*

Note, *The Cold which* Mercury *hath need of for its hardening and death, is not outwardly perceptible, like Snow or Ice, but is rather hot. Nor is the heat by which* Mercury *flows, felt by the hands, but 'tis rather cold. Hence Sophiſters (that is men ſpeaking without knowledge) pronounce him cold and moiſt, and ſtudy how to coagulate him with hot things, and thereby rather liquifie than harden him. Which thing Experience it ſelf teſtifieth. True* Alchymy, *which by one only Art teacheth to make* ☉ *and* ☾ *out of the Five Imperfect Metals, uſeth no other Receipts, than only from Metals, out of Metals, by Metals, and with Metals, are Perfect Metals made; for with other things it is* Luna; *for in Metals it is* Sol.

Glaub.] Here *Paracelſus* demonſtrates their Judgment to be falſe, who ſay that Mercury (in it ſelf a meer Fire) is by nature Cold, and returns to ſpeaking of Spiritual Metals, the which being ſtirred up by great heat of Fire, do operate upon one another, meliorate, change, and advance to perfection, as hath been taught in the foregoing Chapters. Then he adds a Fable or Story, how to coagulate or fix Mercury; but it muſt not be taken in the literal ſence, but of the ſpiritual ☽, whereby Mercury is to be promoted to Coagulation, in a moiſt way, and not in a dry, as the other Metals are, which Proceſs I never yet attempted. Then he finiſheth with an univerſal Rule of Tranſmutation, ſaying, Perfect metals are made from metals, out of metals by metals, and with metals, and that out of ſome ☽, out of others ☉ is made. He adviſeth to take no ſtrange thing, and only metalline ſubjects are to be taken for this Work out of ſome *Luna* only; out of others *Sol* only, or ☉ and ☽, both are to be extracted, which I have often tried; as in ♄, which of it ſelf gives only ☽, Tin, ♀, and ♂, by themſelves give only *Luna*, and pure *Sol*; but commixt with other Metals in a due proportion, they give only ☉, and very little or no ☽: Which maturation is to be aſcribed only to the labour and mixtion, which is deſervedly to be admired.

What Matter and Inſtruments are needful in Alchymy.

THere is no ſpecial need of any thing, excepting a Fire-place, Coals, Bellows, Tongs, Hammer, Crucibles, Teſt, (treib ſcherben) *and Cupels made of good Beech-aſhes. Then put in* ♄, ☿, ♂, ☉, *Copper,* ♀, *and* Luna. *Proceed to the end of* ♄. *'Tis very difficult and uncertain to find out Metals and Minerals in the Earth and Stones; yet becauſe all Metals are to be firſt ſought after and digged out of the Earth, this Labour is not to be contemned, but is Praiſe-worthy. Nor will this luſt and deſire in digging in Mines ſooner ceaſe, than the love of young Men to Maids will fail; and as the Bees are greedy of extracting Honey and Wax out of the Roſe, ſo prone and forward ſhould a Man be, to find out the Minerals in the bowels of the Earth, but without Covetouſneſs; he that is overmuch greedy, receives leaſt, for God doth not fill all men with gold and ſilver, but with want, dung, dirt, miſery, and ſcarcity. Some men alſo God beſtows a peculiar Intellect upon, and a piercing knowledge of Minerals and Metals; ſo that they know a far more compendious way of making* Sol *and* Luna *without digging in the Mine-pits, and without the Examen or Trying, and Fuſion of Minerals. So that 'tis not ſo altogether neceſſary to dig in the Earth for native* Sol *and* Luna, *but by a certain knowledge it might be made of five Species, (but of Minerals become Metals, which are Imperfect Metals, and are ſo called)* viz. ♀, ☿, ♄, Mars, *and* Copper: *Of ſome more eaſily, of otherſome more difficultly is* Sol *and* Luna *to be had.*

Note alſo, *That out of* Argent-Vive, *Lead,* ☿, *Gold and Silver is eaſily made; out of* ♂ *and* ♀ *difficultly. Nevertheleſs 'tis poſſible, but in the beginning and acceſs of* Sol *and* Luna.

Out of Magneſia *and Lead comes* Luna.

Out of ♀ *and* Cinnabar *ariſeth pure* Sol.

Likewiſe an Ingenious man (as I well remember) is able

able by due attention and preparation ſo to handle a Metal, as to be able by his ingenuity to do more in the Tranſmutation of Metals to perfection, and to guide the ſame better than all the Signs and Planets of Heaven can do. 'Tis alſo needleſs to obſerve the Twelve Signs, and to calculate the motions and Regiment of the Planets, and to obſerve a time, a day, the hour of this or that luckey or unluckey Planet; ſuch things neither promote nor hinder any thing; they neither hurt nor profit ought in the natural Art of Alchymy: *But if thou rightly underſtandeſt the art and poſſibility thereof, then go to work and labour when thou ſeeſt it moſt convenient; but if thou want'ſt the knowledge and practice thereof, then all the Planets, Stars, and Signs will wholly fail thee. It alſo comes to paſs, that metals lying long in the Earth, are not only changed into Ruſt, but by a longer ſtaying in the Earth, they return into their Native Stone, of which ſort are many found, albeit they are not obſerved, for there are found ſtony pieces of Money, of the* Gentiles, *which were Metal heretofore, and by Corruption were transformed into Stone.*

Glaub.] Here we are, in the firſt place, taught, that for the making of ☉ and ☽ there needs not many Inſtruments nor Species, but the metals are only to be conjoined, but not by the common ſeparation or waſhing: For if you ſhould waſh all the metals with Lead, yet would there remain no more ☉ and ☽ than was taken at the beginning; the reſt will deſcend with the Lead into the Cupel, and will lie at the top thereof like *Scoria*; therefore he doth again direct to a ſpiritual Commixtion and Philoſophical Separation. Alſo he adds, That 'tis an honeſt, good, and neceſſary thing to dig up Metals, but that the other is the more excellent, and that deſervedly, for it ſeparates Gold and Silver by Art from the more vile metals; for all ſuch as apply their minds to metals, do well know with what dangers, coſts, labours, and Cares, they are to be gotten out; but yet 'tis not therefore to be abſtained from, eſpecially ſince we labour by this Rule, of having a fore-known and certain end of our pains and work; the which cannot indeed be done in metallick Mineings, for we are frequently drawn by vain hopes to beſtow all our Eſtates on the Mines; and having ſpent all in vain labour, we are at laſt compelled to deſiſt from the Work; but yet if it ſucceeds well, they yield the more plentiful Returns; and many Chronicles of Metals do teſtifie, That many Poor men have, by the Benefit of a rich Mine-pit, grown moſt Rich and Wealthy in a few years ſpace. The finding out of Mines therefore doth wholly conſiſt in Chance and Caſualty, where Profit and Loſs are equally and alike to be expected: The Work is likewiſe very chargeable, and can't be ſet upon by every body, and therefore 'tis not for ordinary People, who have but little to loſe, but for rich Men, who, though they loſe much, are notwithſtanding able to live, unleſs happily a Poor man lights upon ſome Earth or Sand that is very rich in ☉ and ☽, and other Metals, by the waſhing whereof he may get a livelihood; or elſe finding a rich Mine, and ſo betakes himſelf to a Rich man for his Copartner, ſuch a one as is able to bear the Charges of digging it forth; and this is often done. But yet be it as it will, the thing is full of uncertainty. Whereas this Metallurgy, or Work on Metals, which *Paracelſus* makes mention of, is to be preferred far before the other, if any one (by the Grace of GOD) attaineth the Art, whereby he may with profit extract the ☉ or ☽ out of the already-digged-up Imperfect metals, which are every where to be ſold.

But to return to the buſineſs in hand, *viz.* To illuſtrate the Writings of *Paracelſus*, who deſerved much of his Country. He names ſome metals, out of which Gold and Silver may eaſily be extracted, and others, out of which 'tis difficult to get it, but in both *Sol* and *Luna* is to be added; for 'tis profitable, yea, neceſſary (the which I have frequently exhorted to) in the extraction of Gold and Silver out of imperfect metals, and is volatile, and may the more commodiouſly make it corporeal and fixt. Then he adds, That Metals, by a longer ſtay in the Earth, do die, and return into ſtones and earth, from whence they had their original. The like happens to Man, and all Creatures; nor is there any thing in the World, how glorious ſoever it be, but is vain, empty, and periſhing, but the Knowledge, Love, and Fear of GOD alone.

What thing Alchymy *is.*

ALCHYMY *is an intention, imagination, and ſtudying, or conſidering how or whereby the Species of Metals are tranſmuted from one degree and nature into another. Let therefore every ingenious and underſtanding man throughly conſider the good Art of* Alchymy, *for he that ſpeculates and well ſtudies, will the ſooner attain the Art and find out the Truth.*

Note, *That very much is to be attributed to the Stars and Stones, for the Stars are the framers of all Stones. And all the Cœleſtial Conſtellations, the Sun and Moon, are in themſelves nothing but ſtones, from which the Terreſtrial do ariſe, being as it were their burnt part, Coal, Aſhes, Outcaſt, Excrement, Expurgation, from which the Cœleſtial Stones ſeparating themſelves, become clear and tranſparent by their proper brightneſs: And the whole Globe of the Earth is nothing elſe but a dejected, ſlidden down, commixt, broken, recocted Rubbiſh, and blown as 'twere into one Maſs, having obtained Reſt and Conſtancy in the middle Circle of the Firmament. 'Tis alſo to be noted, that* Gemms (*the names whereof I ſhall preſently mention*) *together with the other Stones, came down into the Earth from the Celeſtial Stones or Stars, to which they are neareſt in all perfection of Purity, Fairneſs, Brightneſs, Virtue, and Conſtancy, or Fixity, and Incorruptibility in the fire, and are in a manner like to the Celeſtial Stones and conſtellations, being parts of them, and of the Nature derived from them, and are found by men in an impure groſs veſſel, and are ſuppoſed by the vulgar (who judge raſhly of all things) to have been there born or generated; ſuch as are found are poliſhed, and are carried throughout the World to be ſold, and are accounted as great Riches, becauſe of their form, colour, and other Virtues, of which I am now going to Treat.*

Of Gemms.

THe Emerald *is a green Tranſparent ſtone; it helps the Eyes, ſuccours the Memory, defends Chaſtity; the which being violated, it ſelf,* viz. *the ſtone, is hurt.*

The Adamant *or* Diamond *is a black Cryſtal; 'tis called* Evax, *becauſe it produceth Joy: 'Tis obſcure, and*

of an Iron colour, moſt hard, is diſſolved with Goats blood, and exceeds not the bigneſs of a Filberd Nut.

The Magnet *is a ſtone of Iron, becauſe it attracts Iron.*

The Margarite *is a Pearl, and not a Stone; 'tis generated in ſhells, and is white; for whatſoever is generated in Animals, in a Man or Fiſh, is not properly a Stone, but only in the opinion of the vulgar: It is properly a depraved (or a tranſmuted) Nature on a Perfect Work.*

The Jacynth *is a yellow pellucid ſtone; 'tis alſo a Flower, the which the Poets fain to have been a Man.*

The Sapphire *is a Skie-colour ſtone, of a Celeſtial nature.*

The Ruby *is a ſtone deeply red.*

The Carbuncle *is a ſtone of the Sun, emits light and ſplendour, like to the Sun in his own nature.*

Coral *alſo is like to a ſtone, all red, it grows in the ſea, on wood or a ſhrub, of the nature of the Water and Air; 'tis preſently changed by the Air, and turns to a ſtone, grows red, is incombuſtible in the Fire, and therefore may be eſteemed a ſtone.*

The Chalcedony *is a ſtone with bright and obſcure colours, with mixt and cloudy fluidities and colours, ruddy, like to a Liver, the vileſt of all the* Gemms, *ſhining with every colour.*

The Topas *is a ſtone, ſhining alſo in the night; 'tis found in either rocks or ſtones.*

The Amethiſt *is a ſtone of a red and yellow; it ſhines.*

The Chryſopaſſus *is a ſtone fiery in the Night, and in the day it appears Golden coloured.*

The Cryſtal *is a white tranſparent ſtone, like to Water congealed by the Air, and cold, (or of the Air and Cold) it is ſublimated, extracted, or (as they ſay) waſhed out of other Rocks.*

And now, for a Concluſion, I will give you this moſt true farewel. If any one will uſe a right reaſon, ſence, and cogitation towards Metals, what they are, and whence they come, let him know, that our metals are nothing elſe but the beſt portion of common ſtones; they are the Spirit of the ſtones, that is, the Marrow, Oyl, Pitch, and Fat of the ſtones; but it is not ſincere, pure, and perfect, as long as 'tis mixt and hid in the ſtones; this therefore is to be ſought for and found in ſtones, and to be known in them and extracted from them; and then it is no more a ſtone, but a well-wrought and perfect Metal, aſſimilated to the Cœleſtial Stars, the which alſo are peculiar ſtones, diſtinct from theſe ſtones. Whoever therefore is willing to find out metals, let him firmly believe this, and thus account, That he muſt not be only intent on the common Metals, nor have his hope placed in the bowels of the Earth, that ſo he might get good Minerals from thence, for often times there is above or without the Earth in ſight, which is not in the profundity and depth thereof, and oftentimes is better, and more rich.

Therefore all ſuch ſtones as you meet with, whether great or ſmall, as great whole ſtones or flints are to be moſt accurately ſearch'd or look'd into, and to be conſidered of what Nature and Property they are; for oftentimes a moſt vile Flint is found to be more excellent than any Cow. For the Matrix or Rock, Abbruch, *whence they are gotten, from whence ſuch a ſtone did ariſe, is not alwaies to be earneſtly ſought after, that you may have more from thence, for theſe ſtones have no Rock, the Heaven is their Rock; oftentimes alſo the Abject Earth, Powder, and Sand, hath much gold and ſilver Duſt,* (Schlich) *which obſerve.*

Glaub.] Here *Paracelſus* declares what *Alchymy* is, whoſe words being perſpicuous enough, need no illuſtration: Then he leads us to the birth of metals, the which are generated in the Earth, out of the Stars above: He attributes to Gemms the neareſt place of Perfection, but does not intend that we ſhould earneſtly ſeek after them, to have gold and ſilver from thence, but that the metals ſhould be made like them, as to their outward Aſpect, and then afterwards the ☉ and ☽ is to be extracted, to which all the ſcope of the foregoing Chapters tend, which is to be obſerved and enquired into, what his meaning is: Nor are the bare Letters alwaies to be truſted to, here is nothing mentioned by him in vain. What affinity have Gems with the metals? None at all: And although ſometimes the hidden ☉ and ☽ may be extracted, yet he doth not at all intend here that we ſhould make that, but repeating the former Doctrine, he hints unto us, That the metals out of which the ☉ and ☽ is to be extracted with profit, are to be firſt reduced into ſoluble or inſoluble Glaſs, moſt like to Gemms; a good Company of them he here reckons up, and adds to what uſe they ſerve; not that we might learn their Nature, Colour, and Properties, (as I ſuppoſe) but to teach us, that as they are found different in Colours and Virtues, even ſo may the metals be prepared into Colours like unto them. He that neither underſtands nor will believe, let him ſeek better things, and get help and aſſiſtance elſewhere.

Then at length, by way of addition, he concludes what Metals are, and that they are not alwaies to be gotten out of the profundity of the Earth, but are ſometimes to be found moſt plentiful in moſt vile powder, ſand, and ſtones; neither is it neceſſary to be earneſt in ſeeking their rock or original, whereby more may be gotten, becauſe the Heaven by its operation generates them every where: he reproves men for their blindneſs, becauſe they alwaies gape after great Mines, lying deep, dangerous to be found, and chargeable to dig out. That which is laid before their feet, as it were, they diſdain to acknowledge, peeviſhly affecting the dark, and ſtubbornly contemning the light exhibited to them by honeſt men, and by an innate malice they ſtudy to extinguiſh it. And thus is this Book ended, the which *Paracelſus*, a moſt experienced man, hath left behind him, written of Metallick things, and is moſt full of abſtruſe wiſdom, although few believe it, to the Elucidation and explaining whereof, I have heretofore uttered my mind, nothing doubting, but that hereafter it will be in better eſteem with All.

Indeed I could have written more openly, and explained his words more largely, and more exactly have diſcovered his occult ſence, but time and want of leiſure permits it not at preſent. But if I ſeem to any body to have written more obſcurely, let him conſult with my other Writings, for they illuſtrate one another.

Now follows the Praxis of the aforeſaid Theory.

THE afore-written Explanation of the Book *(of Vexations)* of *Paracelſus*, hath taught a moſt certain and undoubted Tranſmutation of Metals, and

and hath ſufficiently adviſed by what means they are to be handled. But becauſe this action requires a great experience in metallick affairs, I am willing to add ſome ſpecial waies of Proceeding, and that in perſpicuous words; but 'tis impoſſible to write ſo plainly that none may erre; it would be too prolix, tedious, and unfit, and as if many Elements of the Phyſicks, and other ſubtile things, were read to a Child that is not capable of underſtanding them; the labour thus beſtowed, would be wholly in vain: Nor do I undertake to inſtruct the Tyroes or Novices in *Alchymy*, but ſuch as are skill'd in the metallick labour of fuſion, waſhing, ſeparation, and the like, of a ſubtile Intellect and experienced Judgment.

I would verily have written more clearly, did I not fear that the Art would become a Trade; ſome will think that I have written too openly, and will be angry that ſuch Secrets are made known to the World: Who can ſatisfie all People? But be it as it will, 'twill be alwaies good to have done a profitable Work for my Neighbour.

This is the ART.

WHen thou haſt put in the Heaven of ♄, and haſt made it to flow with its Life in the Earth, then add the Imperfect Metals in a due weight, *viz.* ♄, ♃, ♂, ♀, and a little ☽; let them flow ſo long with the Heaven, until with it they diſappear, and having loſt their nature and metalline form, are reduced into earth. This metallick earth being yet joined to the heaven of ♄, and compaſſed wholly round therewith, raiſe up by the ſpirit of Heaven, and make it corporeal, and it will receive its former metalline form; but although it be bettered, yet let it be killed three, or four, or five times, and raiſed up, that the melioration may be greater, and produce in the ſeparation more *Sol* and *Luna*. There needs no Tyle, (Muffel) Cupel, Teſt, (treibs-ſcherben) Cucurbit, *Aqua-fortis*, and ſuch like Veſſels and Inſtruments neceſſary in other Metalline Labours, but 'tis perfectly finiſhed in one only Crucible, in one Furnace, with one only Fire, and in the ſpace of a few hours, from the beginning to the end. And to ſpeak more plainly in this Proceſs, the Sphere of ♄ is the *Regulus* of ♁, the Life is a whitening Salt, having its operation and motion from the Fire; the Earth is the Crucible. And thus haſt thou the whole Proceſs of the Work laid open, the which I have tried above an hundred times in a ſmall quantity; but let the ſtudious Artiſt, above all things, obſerve the Fire, of what original, nature, and virtue it is, and the other things will be the more eaſily underſtood; for the Wood, the Coals, and ſuch-like burning things, are not the Fire properly, but only its habitation, in which the Fire being occultly diſperſed in the Air, is made manifeſt, viſible, and perceptible. Even as the Man is not the Life or Soul, but only the receptacle wherein the Life or Soul, being infuſed from above, doth lodge: Nor is the man any more a man, but a meer carcaſs when the ſoul expires. In like manner Gold ceaſeth to be Gold when deprived of its ſoul, but is volatile, and a Mineral without colour. Whence 'tis evident, that the Goodneſs of metals conſiſts not in their bodies, but in their ſouls: On this account ☽ is added to the Imperfect Metals, that it may receive that inviſible ſoul which lies largely diffuſed throughout their bodies, that it may collect it, make it viſible, perceptible, and corporeal, whereby the mixtion of both (*viz.* of the *Luna* and the Soul of the Imperfect Metals) being made, it gets the name of ☉. Some body may ask, *Whether or no Gold will be produced, if no* ☽ *be added to the metalline mixture?* For anſwer, There will be ☉ produced, but leſs in quantity than if *Luna* were added, becauſe the moſt tender (and as it were incorporeal) golden ſoul of the imperfect bodies is not able to quit it ſelf and get out by its own proper force, from ſo many impurities as 'tis invironed with, without ſome other help, nor make a new body; 'tis needful and good to adminiſter and lend to it a body wherein it may be contracted, and thereto betake it ſelf, for which the *Luna* is moſt fit; the which being by a vivifying Fire radically united with the unclean metals, and well ſubdued or exerciſed in the mutual aſcenſion and deſcenſion, the purer particles of the Imperfect bodies do come together in this Circulation of the *Luna*, adhere thereto, are mixed, and become corporeal, the impure corruptible body being left, and a ſeparation made of the good from the bad.

So then, I have now taught perſpicuouſly the Art of extracting *Sol* and *Luna* out of all the Imperfect Metals, either apart, or conjoined with or without the addition of the *Luna*. If therefore thou attaineſt to the Art, I am glad; if not, thou haſt no cauſe to complain of me, for I have candidly imparted unto thee the meer and naked Truth.

Another Separation of Sol *and* Luna *out of the Imperfect Metals, by* ♄.

FIrſt of all, melt ♄ well in a melting Veſſel, (Scherben) add ♀, ♂, and ☿, mixt in due weight, melt them together, and forthwith the ♀ and ♂ will corrupt the Lead, being reduced into *Scoria* like to yellow Earth, and being reduced, they will in part reſtore their own Lead and Copper, but the ♀ and ♂ remain like black *Scoria*, which are to be kept: Let the Coppery Lead flow well again, and again add ♀ and ♂, and there will be again made *Scoria*, which are preſently to be reduced. Let this Labour of Scorification and Reduction be repeated, until there remain ſcarce one or two pound of Lead out of an hundred to be waſhed, and you ſhall find ☉ and ☽ in part, which the Metals give out from themſelves in this operation: But the *Scoria* which can't be reduced, let lie well heated red hot, in a peculiar Furnace, for ſome daies, and be fixed, and they will give in the reduction a golden and ſilvery ♄ or Lead to be waſhed, that ſo the remaining ☉ and ☽ which the *Scoria* drank up, being extracted, may be of uſe unto us. This labour (which I never tried in great quantity, will doubtleſly (in my opinion) ſucceed in quantities; any one may try the thing, and exactly compute how much profit may be thence had every year.

Alſo the moſt Imperfect Metals may (by the benefit of Salts not corroſive) be truly and infallibly fixt and waſh'd by a particular way, that they may give much ☉ and ☽, concerning which none need to doubt; the which I having oftentimes mentioned in my Writings, will not repeat it again.

Metals alſo being firſt reduced into a Calx, may be purged and waſh'd by the glaſs of Lead, made by the addition of Flints, ſo as to yield much *Sol*, concerning which I have written heretofore: But there's required much ☿, whereby the metals may be largely diffuſed, otherwiſe it will not let fall the fæces; nor can its more pure parts be gathered together into a body, and concentrated; I take in the Flints, that they may receive into themſelves the fæces of the unclean Metals, and ſo make a ſeparation of the pure from the impure. And like as we are wont to mix the whites of Eggs to Honey, Sugar, and other Vegetable Juices, in the purification of them by Water, that thereby the viſcouſneſs of the Juices may be attracted, and ſo be clarified. In like manner, the Flints do in this operation occupy the place of the whites of Eggs, and ☿ of the Water wherein ♂, ♀, or ♃ is to be diſſolved; the Labour is moſt pleaſant and ſpeedy, exceeding gainful, if the Crucibles (perforated by the Litharge) would but hold the mixture, and not let it paſs through ſo ſoon.

But whoſoever ſhall be ſo happy as to find Veſſels which can keep in the Glaſs of Lead for ten or twelve hours, he need not be ſolicitous or careful of other Arts to inrich himſelf by. For my own part, I could never be ſo happy hitherto, albeit I have carefully ſought it for ſo many years. One only pound of Iron, ♀, or ♃, doth ſometimes yield half, yea a whole lot of *Sol*, if the Work be rightly managed. And if you add a fix'd Salt, as of Tartar or bare Pot-aſhes, it will then yield more, but the Crucibles will be the ſooner perforated to our grief. I do believe that one or other will be a curious Searcher after this, and may in due time find how to make this Work ſucceed very well, both in Crucibles and in great Fires, or melting places; and will be thankful to GOD the Giver, and to me the Writer hereof. Heretofore I did ſet by this Labour very highly; and although I would not then communicate it to any body for a great price, yet now (being not permitted to make any further Progreſs therein) I freely beſtow it, that others alſo may try their fortune.

Alſo imperfect metals are purged from their combuſtible and noxious ſulphur, by the ſuddain fire of Nitre, of which we have formerly ſpoken about Mercury, the which is to be lookt on as the moſt ſpeedy, and as it were a momentary Melioration of metals N. B. eſpecially if they are reduced into a ſoluble ſalt without a Corroſive, for which thing ♂ and ♀ are moſt fit, exhibiting a Philoſophical Vitriol, the which may be moſt commodiouſly purifyed to perfection. There's a great ſecret lies here under, and haply greater than a particular work may require; let the Poetical fable of *Venus* and her ſon *Cupid* be conſidered of; what is there meant by *Cupid*, whether or no it be not ☉. Verily I could diſcover more good ways of producing ☉ and ☽ out of the more vile metals, but becauſe there's enough already ſpoken in the explication of the ſeven Canons or Rules, it ſeems good to me to forbear. He that doth not underſtand that nor can apprehend its drift or ſcope, will not be profited by the addition of more things. If the fundamentals are laid open, any one will conveniently adminiſter his intent and labours: But yet I will add over and above, a moſt pleaſant work, Parabolically, being the foundation and Baſis of the whole Alchymical Art, under which is comprehended the radical ſolution of metals, *Conjunction*, *Deſtillation*, *Sublimation*, *Aſcention*, *Deſcenſion*, *Cohobation*, *Cementation*, *Calcination*, *Inceration*, and *Fixation*, and ſo I will end the work of *Tranſmutation*.

There was a man (♄) who had two ſons, (*Biſmuth* or *Tinglaſs*, and ♃) the younger (♃) ſaid to his Father (♄), give me my portion, (Note well, *Biſmuth* and ♃ were always accounted Lead, as well by the Philoſophers, as by the ancient workers on metals, the one *viz.* *Biſmuth*, they called an aſhy colour'd Lead, the other (♃) a white Lead, and this a black Lead,) and behaved himſelf ſtubbornly and unmannerly, that is, aſcending or getting up; his Father gives it him, and he goes a wandring therewith, (Note well, when ♃ and *Biſmuth* together with ♄ do feel the fire, the ♃ is ſeparated from the ♄ and *Biſmuth*, and aſcending, takes ſome-what from ♄ with it, and becomes a Contumacious *Scoria*, and this is to go a wandring) and he enters into an Inn, *where* ♂ *the Hoſt*, *and* ♀ *the Hoſteſs*, had the ſign of the World(♁) in a hanging Table, who having entertained him, diſpoiled him of all his Fathers goods, (Solution) Then there grew ſuch a great ſcarcity of Corn (with drought) that all men were even deformed by reaſon of the Famine (corruption), to prevent which he is enforced to keep hogs, (that is to dwell with fætid Nitre) and to feed on huskes, (that is *Tartar*) (inceration, imbibition) by which being humbled (Digeſtion, Circulation, Edulcoration, Putrefaction) he returns to his Father, (Incorporation) as a loſt Son, (ſome thing is made nothing, and nothing is made ſomething again) he brings forth a new Garment, (*Argenteous*) he puts a Gold Ring on his finger, (☽ impregnated with ☉) after which he remains conſtant with his Father, and becomes a good and thrifty Houſeholder, that is, a fixt metal. And now that I thus compare this Tranſmutation of imperfect bodies, eſpecially of ♃ to the parable of the loſt Son let no body be therewith diſpleaſed, for I did it for the eaſier knowledge thereof. There lies under it a great ſecret, I never obſerved the like-changes in my whole Labours; for firſt of all, in the Solution appears a blackneſs, which haveing remained his time, there follows the tail of the Peacock, greenneſs and then whiteneſs; but whether or no a redneſs would follow, if it be detained longer in digeſtion, I am not certain, for I never arrived beyond the whiteneſs. It is a moſt pleaſant Labour, greatly exhilerating the Artificers mind, of ſmall charges and little difficulty; if they, find the weight and good veſſels, it ſhews the way and opens the Door to higher Secrets, happy is he who attains the things, he'll never be ſatisfyed with the ſight thereof, nor admiration, how rich, generous, fair and glorious Nature is in her retirements. Note well, that every Metal may be waſht apart with ☿ and Salts, ſo that being exalted, it may yield ☉ and ☽ in ſeparation, and paſs through all colours; but it will not be ſo profitable, as if they were all joined together, for then one operates ſpiritually upon the other, changeth and perfects him. And now having abundantly diſcovered, how ☉ and ☽ is to be extracted out of the imperfect metals, and becauſe in that labour ☉ and ☽ is moſt an end jointly together, 'tis very neceſſary to know, by what Art they may be ſeparated each from the other, that ſo each may be had by it ſelf, which is

to

to be done thus; If this mixture hath more ☉ than ☽, 'tis moſt profitably to be melted by Antimony and precipitated into a Regulus with Iron waſhed with Nitre and purifyed. This work you may find deſcribed in my former Books. NB. If the Nitre in the ſeparation of purification of the Reguli, prey upon ſome of the ☉ and ☽ and attract it to it ſelf, let none grieve thereat and account his labour loſt, but let him remember the ſaying of *Paracelſus*, Deſtruction or Corruption makes the good perfect; The Nitrous Scoria, in which the cleanſed Reguli are, let be carefully kept and fixt, then by a ſtrong flux let them be reduc'd and you ſhall receive the loſt Son, much more elegant than he was before it's being loſt, ſo that hereby you loſe not, but rather become a gainer. Here would be a fit place to ſpeak of a certain profitable work if the drift of the thing would permit. Enough is ſpoken to a wiſe man, Fools will not profit by any thing: But if it contain more ☽ than ☉, let the mixture be at firſt of all granulated, and burnt with Sulphur, let it be precipitated, either with ♂ alone or without it, with lead and Salts; thus ſeparating the ☉ from the ☽ into Reguli; then waſh it with Nitre or with Lead, and let it be purifyed, the work being to be done in like manner. You are to note that if the precipitation be done with ♄, then the *Caput mortuum* (Halb Kopff) is to be added, whereby the work will be apparently haſtned and bettered. NB. If the Reguli of the maturated or fixt Metals be coppery or pale, they need not be waſht, but 'twill ſuffice if being granulated, they are precipitated with Salts, and the *Caput Mortuum* (Halb Kopff,) all the ☉ and ☽ will come forth in peculiar Reguli, the Copper and the Lead will be ſcorifyed, and may in acute Furnaces (Stich ofen) be reduced, and be aplyed to other uſes according to the rule of Art. I judge it inexpedient to heap up more things concerning Extraction (Seigeren) waſhing, and the ſeparation of metals, being every where mentioned in my other writings. Alſo it will be needleſs to explain, by what manner metals may be more commodiouſly melted ſo as to yield more and better metals, as alſo how the poor and rough Minerals that abound with a preying and devouring Sulphur, whereby the metal in its fuſion, is turned into *Scoria*, and affords ſo little profit, that being not able to quit coſt, they remain unmanaged, the which Sulphur eſpecially in the Minerals of Copper and Lead, may by a ſingular Cement or Gradatory fire, be inverted and changed, ſo that afterwards in their fuſion, It's ſo far from ſwallowing up the metal, and turning of it into *Scoria*, that it rather exalts it ſo as to give ☉ in the ſeparation, the which could never have been done without this burning or roaſting. No body doth throughly ſearch after any help for this or that metal, either before the melting or in the melting of it, if the groſs fire is not able to melt it down, but moſt frequently the beſt part remains in the *Scoria* without profit or uſe. 'Tis poſſible for an experienced Chymiſt, profitably to extract that ☉ and ☽ which the *Scoria* have ſwallowed up, what by fuſion and by adhibiting ſuitable *Menſtruums*. A work of this nature hath been hinted in my diſcourſe of the Extraction of Flints, and more ſhall be likewiſe mentioned when I come to write of the felicity and hidden Treaſures of *Germany*, which time let the Reader with patience expect. A nother benefit would ariſe to ſuch as work on metals, if they had the perfect way of ſeparating ☽ and ſeparating the ☉ by precipitation, that lies therein, (Meider Schlagh) that it may not be ſo unworthily waſted with the ☽ by the Artificers.

And thus I conclude this Appendix or addition to the Mineral work, the which I have brought forth to light with a good will for my Neighbours ſake, that ſo, being accepted with a ſerene mind, the Glory of God may be thereby advanced; for which end I wiſh with all my heart a divine benediction on the Labours of every honeſt and active ſearcher into the metalline affairs. *Amen.*

The APOLOGY of
John Rudolph Glauber,
Againſt the Lying Calumnies of
CHRISTOPHER FARNNER.

'Tis an ancient Proverb, *He that toucheth Dung is defiled, and will alwaies ſavour of a Dunghill.* Experience makes it evident.

I Ever hated Quarreling, as more agreeable to the Peviſhneſs of Women, than the more Generous Temper of Chriſtian Men; and have, as much as I might, alwaies declin'd it, being rather deſirous to ſuffer injuries, to bear loſſes, by ſilence to forgo thoſe things I might lawfully lay claim to, to undergo any thing, ſo that I might enjoy my beloved Peace (with which GOD has bleſt me hitherto). Neither have I ever, ſo long as I have liv'd in the World, (and I am pretty ancient) been taken, by the worſt of men, for a contentious Perſon; But perfidious *Farnner*, unpro-

voked, urges me to this vindication of my ſelf, by going about not only to hurt my Perſon, but alſo by a Pride no leſs than his Envy, to explode and defame all my Writings, and by infamous Letters diſperſed abroad, to render me odious to all good men. Which wicked Enterprize, though I heard of it by many, I durſt not believe, till a printed Epiſtle of his came to my hands, which having peruſed, I thought I could not enough admire his deteſtable Impiety, and the many ſcandalous names he had for me.

Art thou not aſhamed *Farnner*, to expoſe my Works to the contempt of others, when thou neither doſt, or ever canſt underſtand 'em, and before now haſt prais'd 'em, as may be proved from your own hand? I'm ſure I never merited that you ſhould cavil at me where-e'er you come, and proclaim my Writings unprofitable. You ought rather all your Life, in conſideration of the many benefits you have receiv'd at my hands, to have behaved your ſelf as a Man grateful to me; but inſtead of that, notwithſtanding the Obligation that lies upon you to the contrary, you have deſpightfully recompenſed all my kindneſs with the baſeſt Ingratitude, which is directly oppoſite to goodneſs.

To what end do you deny that you had your greateſt knowledge from me, and in the mean time expoſe it as your own, and upbraid me from whom you had it?

I never before believ'd you unfaithful, but alwaies thought you candid, and have communicated ſo great things to no man as to your ſelf. I believe you will not deny your coming twice from *Lochgovia* to me at *Kitzinga*, and entreating me to communicate ſome Secret to you, whereby you might get a livelihood. Have you not been forced twice, being repulſed, to return home with this Excuſe, That I wanted time to inſtruct you? And when you came the third time, I ſuffered my ſelf to be perſwaded, and did communicate ſome Secrets to you *gratis*, on this conſideration, That you ſhould impart thoſe things wherewith I truſted you, to no man without my leave; which you promiſed by an Obligation, (*viz.* That you wou'd keep all things ſecret) under the penalty of Diſgrace, and the forfeiture of all your Goods. Why haſt thou falſified thy Word, and contrary to thy Promiſes, ſo wickedly ridicul'd me among all men, when with thy whole Family thou didſt promiſe to be faithful to me? Not only Obligations, but alſo thine own Letters are Witneſſes: Neither do I queſtion, that if I had loſt or wanted them to convince thee, thou wouldſt have denied, and that with an Oath, that thou waſt ever beholden to me for any thing, as thou haſt already begun, and as thou in thy ſpightful Writings deſpiſeſt all my Secrets, and proclaimeſt thine (which yet are mine) with praiſe. You doubt whether or no the reading this will make me repent that I ever truſted you with ſo many things, which I had never done, had not you obliged your ſelf to labour diligently with me in my Laboratory, to produce thoſe things for the profit of us both. But what can I do with them? They are periſhed and gone which yet might ſufficiently have ſuſtain'd both you and me, had not you made 'em publick.

I pray, What gain can you hope for from them, now they are every where known? Wherefore when I ſee thoſe things taken from me, and by you imparted to all men, in ſpight of me, for your own advantage, I think fit (for I cannot hope for any farther profit from them privately) to make 'em known to the World; and by the Grace of GOD, I may live without them: But if I alſo ſhould buy all thy goods which thou unjuſtly poſſeſſeſt and ſelleſt to every man, of thee, and diſtribute them about the world, thou wilt ſee thou canſt not eaſily recover them, or others in their room. I indeed will give you nothing for the future, neither can my unfaithful Servant, whom you have made as good as your ſelf, give you any thing, for whatever he hath learn'd of me theſe two years, he has given you, which you alſo have laid up among your own wares and expoſed to ſale. Who will hereafter truſt you, you have ſo wickedly deceiv'd me? Every man will abominate you, and ſhun your Partnerſhip and Company, neither undeſervedly, for the Laws of your own Obligation make this your Fate: So the merit of the Crime ſhall return upon the Author, and you can be more ſure of nothing, than that Divine Vengeance will purſue you. I confeſs indeed ſome others, as well as you, have injur'd me, but none by ſo wicked an act; whom nevertheleſs GOD (to whom I refer'd my Cauſe) hath ſo ſeverely puniſhed, that each of them, by one cauſe or other, has brought upon himſelf his deſerved Reward of Puniſhment. But I had yet farther tolerated you to exerciſe your Trade at your pleaſure; neither had I followed you to *Lochgovia*, to urge your Obligation to you, but had committed Vengeance to GOD; only for that you were not content to ſell thoſe things publickly for your filthy lucre, which you had of me, and which you obliged your ſelf to keep ſecret, and to take that profit to your ſelf which was due to me, but alſo you have rendered me, and the things you had from me, odious; which has been ſo much to my diſadvantage, that I can no longer bear, but am now reſolved to the utmoſt to refute thoſe impious and lying Calumnies, which you by your Letters have ſent into the world concerning me, and to defend my ſelf and my Works, againſt which you have ſo wickedly inveighed, that all the world may ſee how great your perfidiouſneſs has been towards me, and that your Heart acted by Helliſh wickedneſs, has raged againſt me with horrid Lyes, Taunts and Reproaches, contrary to all manner of Equity: You muſt needs know, that nothing can be more troubleſome to me, than to ſpend that time in reproving your Lyes, which I could otherways employ to greater profit; wherefore I ſhall anſwer your trifling ſtories as briefly as is poſſible. Every wiſe man will eaſily ſee how frivolous your Excuſe is. Do you think that any honeſt man will believe you, if you ſay you don't owe the greateſt of your Knowledge to me? No ſurely, for no man is ignorant of it: About two years ſince, you did not know how to bring a Crucible to the Fire, much leſs to make a trial of Braſs; which you did not learn of me, but my unfaithful Servant taught it you, whom you for that cauſe eſteem; yet ſeeing you know ſo much, how lawfully may I complain of him, what a Raſcal he has been to me, and that you for that very reaſon have taken him to your ſelf, that you may fiſh from him whatever he had learned in thoſe two years he ſerved me; although he did not ſhun you, becauſe he was unwilling to communicate thoſe things he had learn'd of me to any man elſe.

And ſo you make your ſelf Maſter of my Secrets, and Covenant with him to undo me and mine: Is this the part of a good man? You do not only

only expose those things you had of me, but those also which my perfidious Servant has since given you, to be sold at a price, when you have no right to sell another mans goods, to which you have no title. We'll come to the point and expose all your wickedness, as well your impious speeches, as perfidious actions, to the view of the world: But first of all, I will lay before you the obligations you gave me, as most sure pledges of your truth, that by the review of them, you may judge your self how honest you have been, and how faithfully you have kept your promises; and every man shall thence see, (especially those among whom you have so wickedly ridicul'd me) with what base ingratitude you have recompensed all my Favours.

The first Obligation which FARNNER *gave me, runs thus;*

Forasmuch as the most excellent and learned Mr. John Rudolph Glauber, *moved by a singular affection towards me, has communicated, shewen and demonstrated to me undernamed, some of those secrets whereof he is Master, and hath enjoined me to silence; I therefore bind my self, and promise upon my Credit and Reputation, and call God and my christian profession to witness, that I will divulge none of those things to any man living: but if it be so (which God forbid) that I do at any time communicate any of those things to any man, then I shall most willingly renounce all my right in those Goods, movables or immovables, which I shall possess, and give him absolute power to take them to himself, and convert them to his own use and advantage: and not that only, but I give him farther power to proclaim me perfidious and wicked, to defame me and make me abominable to all men, for which reason, the laws of Silence shall be observed by me most strictly. Nay farther, in consideration of the many benefits he has bestowed on me, I give up my self, my beloved wife, and my children to serve him in all things lawful and honest, to go when and where he pleases, and to ease his labours; and if he dye first, (which God avert) to be alike serviceable to his whole Family, which care he also has promis'd to me and mine: I promise then, (if my Fates grant me life) that I will be to my utmost, serviceable to him so long as he lives: In witness whereof, I have hereto set my hand and seal. Given at* Kitzinga, *the* 15th *day of* June, 1652.

Testis, Spirensis Canonicatus Quæstor, *Lochgoviæ & Horrhemi.* Christopherus Farnnerus.

The second *Obligation.*

I Christopher Farnner, *for the time being Canonicate Quæstor of* Spire, Lochgovia and Horrheme, *in the Dukedom of* Wirtemberg, *to all by whom these presents shall be read, make known, that the most excellent and learned Mr.* John Rudolph Glauber *for little or no reward, has communicated some of his secrets to me, and with me made a covenant after this manner, That I must oblige my self for what he hath already done, or hereafter shall do for me, to be all my life thankful, not only to him, but to his Children also. But for as much as 'tis most certain, this life will have an end, but we know not the time when, the first Obligation is not full and clear enough, and for that cause I bind my self and promise, (so help me God) and swear by the King of Heaven who always bears witness to the Truth; and farther, upon my Credit and Reputation, for the preservation whereof every Christian man should be induc'd to keep his promise, if (which that God would in mercy avert, I shall not cease to put up my daily Prayers) the above named Mr.* Glauber *and his beloved wife shall die, and leave their Children unmarried, I do oblige my self by this most solemn Oath, to observe faithfully, and as a Christian man ought, these following things:* viz. *I will forthwith take his Children to an inheritance with mine, and to my utmost skill, instruct them in the secrets of their dead Father, and shew them all things requisite and necessary, as fully as to my own Children; and that after this manner, That what ever of their Parents heritage belongs to them, they shall wholly possess, and they shall lawfully demand it as their proper due; and if any thing goes from him, I will redeem it, so that my Children shall lay no claim to it: on the contrary, (for those secrets communicated to me, which hereafter may redound to my profit) I make the aforesaid Mr.* Glauber's *Children Heirs with mine, that they may be admitted equally to my Estate, and alike enjoy the Goods of me living: But if I* Farnner, *contrary to my expectation, shall depart this World before Mr.* Glauber, *he is bound to instruct my Children in his Art, according as they are qualifyed, only so far, as that thereby they may get their living, and that they may not be burdensome to him. He may at his pleasure instruct him that he shall esteem most fit in some secret, with which he shall afterwards teach his Brethren to get themselves maintenance. And for the same cause, I call my little Son* Alexander, *and surrender him to Mr.* Glauber *and his service, so that he may keep him as long as he shall be willing, and it shall not be in my power to take him from him according to the agreement we have both made with him: all which things are restrain'd to this on either side, That if the Parents of either part die before their Children are provided for, which God forbid, and our Children shall be free by the early death of their Parents, then each shall to his utmost, provide for his own Children.*

That all these things may be observed the more firmly, I affix my Seal and name, and by my own hand writing, oblige my self so, that if at any time I falsify my word, my Children may be call'd to witness my perjury. Given at Kitzinga *the* 10th *of* September, *in the year* 1652. Christopher Farnner.

NB. I did not require this obligation of *Farnner*, neither wou'd I have taken it, but admonish'd him to be true to the first, with which I was content; for he gave me this for no other reason, but to get more out of me: But, because I had found out his cheats, and he wou'd not be advis'd for his own profit, he at last makes mention of this new obligation, in a certain epistle of his, thinking thereby I was oblig'd to a farther communication of my Art to him, tho I have often told him, that I valu'd not this last obligation but wou'd give it him again: But when he refus'd to take it, I cancell'd it, and kept it by me, for this reason, that it might be seen how he had bound himself by this new Obligation, which certainly he wou'd never have done, without very good cause.

Expreſſions gathered out of certain of Farnner's *Epiſtles ſent to me; from which is evident how greatly he is beholden to me.*

THerefore I faithfully aſſure you, that I will ſhortly leave my Houſe, and take a Journey farther off, to provide for my Family; my Wife too is very willing to go with me, and to be intereſted in our agreements, but I can't ſee what ſhou'd oblige her to it, when it can't be effected very commodiouſly: Yet I reſolve, if nothing extraordinary hinder me, after eight daies, that is, on the $\frac{1}{4}\frac{2}{4}$*th. day of* April, *to depart hence, and then anſwer your moſt friendly Letters, together with my beloved Wife, and all my Family, to take part with you in all your Labours, and help you with the greateſt diligence. But becauſe I intend to be ſo ſuddenly with you, I ſhall write no more at this time.* March 26th. 1653.

Out of another Epiſtle, *July* 17th. 1653.

I Hope you will excuſe me, that I did not come to you, becauſe hindered by my Wife's faultineſs, who telling me ſhe wou'd come with me, privily laid Obſtacles in my way; this offence won'd not deſtroy a Knave: Wherefore I again intreat you not to caſt me off, but continue your wonted favour to me; and I ſhall endeavour in my place to give you ample ſatisfaction; neither ſhall any thing hinder my ſpeedy performance of what I have promiſed.

Out of another Epiſtle, *July* 29th. 1653.

FOraſmuch therefore as I have by the wicked deceit of my Wife, broken the many Promiſes I made of coming to you, unleſs I wou'd have taken her wicked Amaſius *or gallant, as Companion in the Journey; it has at length pleaſed God to take her away, and ſo put me in a capacity,* Worthy Sir, *of ſerving you without the leaſt impediment, wherefore I give my ſelf wholly to your Commands: And altho' I have been perſwaded by Perſons of principal Authority to marry again, I will not, but commit my ſelf to be manag'd by your Counſel, as you were my Father. Therefore, ſince we are parted, if my Fates grant me Life and Proſperity, I will come to you, and commit my ſelf to your guidance and protection, Worthy Patron; for which reaſon I ſhall forbear to write any thing at this time of your Laboratory, more than what I ſee in your Letters, that all things may proceed the more regularly. Wherefore, though I have been ſolicited by many, yet ſhall reject all as much as I may commodiouſly, in hopes of this, that when I have firſt gotten your conſent, I may communicate my labour to ſome, whereby I may get a good Sum of Money: But theſe things ſhall be deferred till our happy meeting.*

In another Epiſtle he ſaith;

THat he was confident he could find out all my Art by my Writings, except that the Veſſels do not alwaies abide the Fire, and that the Apothecaries refuſed to buy his Medicines, unleſs he would teach them the way to prepare 'em: Again, he would give me Fifty R. Dollers for each month, for my part, as may be ſhewn from himſelf; theſe are his words: And if he was not oblig'd to me, why would he give me Fifty R. Dollers each Month?

From all which (and much more I might add, which for brevities ſake I omit) it evidently appears, that *Farnner* was obliged to me, which he would never have been, had not he receiv'd ſome benefit from me, which render'd him bound to me: But if he is oblig'd to me, why was he ſo wicked, as in his lying Epiſtles ſo malapertly to deſpiſe, and diſparage me and my Secrets, which he had from me? Hence then every man may perceive what they ought to judge of him, that he has both behav'd himſelf moſt perfidiouſly wicked toward me, and alſo, that he has ſufficiently declar'd himſelf the moſt ungrateful in the World.

But that no man may ſuſpect that I wreſt any word of *Farnner's*, in his obligations given to me, to his diſadvantage, or my own ends, I have taken care to have his own hand-writing view'd by Notaries and Witneſſes, who will atteſt, that what I have printed is word for word the ſame with what I have in writing under his own hand.

A Specification of thoſe Chymical Secrets *which* Farnner *learn'd of* Glauber, *and in the trial found true, and of thoſe which yet are found and brought to trial; where it muſt be known, that thoſe, of which there is no mention made here, if* Glauber *ſhould relate them, they would not anſwer his expectation in Practice, according to his information: Alſo the Charge which he muſt be at who will make trial of thoſe Secrets after a right manner, is here added.*

1. *Glauber's* Panacea, for 30 R. Dollers.

ABout which theſe things are to be conſidered: It is made chiefly of Antimony; *to which, according to his common way, Sulphur is added; which done, another Separation is made, in which, from a whole pound of Sulphur and Antimony, no man ſhall receive more than three ounces of the pureſt Sulphur. There are indeed two other Subjects, which produce a golden Sulphur better than Antimony; but I have found a way to extract a thick and pure Sulphur from all ſorts of Metals (except* Luna *and* Sol*) and Minerals, and after* Glauber's *manner to make Tinctures. All theſe Secrets annexed will be taught for the price named.*

2. *To reduce Minerals and Metals into Droſs, after* Glauber's *way, to reduce them to nothing, and then without Charge to bring them to their own Species again, or to turn them into fluid Oil, or Powder, or Tinctures; which things bear an affinity to thoſe above: For Twenty R. Dollers.*

3. Glauber's Alkaheſt, *and a way to prepare it, perhaps unknown to* Glauber, *and built upon a more firm foundation; Fifty R. Dollers.*

4. *The Trial of all ſorts of Braſs, but not of every ſort at once, for every one muſt have a particular Practice.*

5. *To make ſtore of Flowers of Coral for a little Coſt; ten R. Dollers.*

6. *To make melted Tin hard, that it ſhall ſhine and ſound like* [*Silver*]; *Ten R. Dollers.*

7. *To make white Vitrifications upon Veſſels; for Ten R. Dollers.*

8. *Plenty of Spirit of Salt.*

This is not prepar'd after Glauber's *way, and though* Glauber *was ſo great a Lyer as to affirm, that in a clear Fire fifty pound of this Spirit might be prepared in one day, yet he cannot produce above one or two pound: Wherefore my invention is much better, and my Spirit is pure, but* Glauber's *has* Vitriol *mix'd in it.*

And though I gave Glauber *a great Sum of Money to communicate theſe Secrets to me, yet I have not found any*

any of them true, according to his Information, but was fain, with great induſtry, to ſeek other waies of working thoſe abovenamed.

And for thoſe that follow, though they may ſeem to be derived to me from Glauber, *yet they have not ſucceeded by his Information, but I was forced to go another way to work, which will hardly be found by* Glauber.

9. *To prepare good ſtore of the* Spirits of Vitriol, Nitre, Salt, Aqua fortis, Aqua Regis, *alſo* Sulphur, *after a manner not yet known, and which will ſcarce be known to* Glauber; *forty R. Dollers.*

10. *To produce plenty of volatile Mineral Spirits, which Spirits aſcend the Still before the Phlegm; but the abovenamed after the Phlegm.*

NB. *Theſe Spirits have the ſame taſte that Spirit of Wine hath, and evaporate like it, and are void of corroding: neither do I doubt, but I can produce ſuch Spirits from Metals alſo, though in metallicks I have made no trial yet.*

11. *Flowers of Minerals and Metals, almoſt without diminution, compendiouſly under a refrigeratory cover, which* Glauber *never ſaw; Ten R. Dollers.*

12. *The Quinteſſence of all Vegetables: Although* Glauber, *in his Tract, promiſed to bring that alſo to light, yet he never performed it from all Vegetables, but only from hot, which give Oil, which is of no moment; but that from cold, to wit, Herbs, is artificial. Thirty R. Dollers.*

13. *To give new ſtrength to dead and eager Wines, and make them as good as ever, or better; Two Hundred R. Dollers.*

NB. Note here, *That I very much run againſt* Glauber's *Tract of* Vinary Secrets; *and if my own Induſtry had not taught me more than that, I might indeed, according to his inſtruction, encreaſe the ſtrength of Wine, but with an ingrateful reliſh, ſo as I could never hope to try eager Wines according to Art. But now I cannot only bring to maturity all ſorts of Liquors from both ſweet and ſowre Grapes, and other ſorts of Fruits, and give them new ſtrength in the Hogſhead, but alſo render them pallatable to all men. Whoever hath taſted* Glauber's *Wines, and ſhall afterwards taſte mine, will eaſily diſcern a difference.*

14. *To give any Wines what reliſh I pleaſe.*

15. *To prepare a burning Spirit of all ſorts of Bread-Corn in abundance, with great eaſe and profit, very much like that which is made of the Dreggs of Wine, and ſuſtaining all Trials: There are already eight pounds of it in trial, whether they will bear a Voyage by Sea, or not; they are ſent beyond Sea, which if they will undergo; Two hundred R. Dollers.*

NB. *Further, I know how to reduce all burning Spirits into one form; as, the Spirit of* Juniper, *or Bread-Corn, like to Brandy, or to make ſpirit of Wine like ſpirit of Bread-Corn or* Juniper, *ſo that it ſhall not be diſcerned of what ſubject 'tis made.*

Neither do I doubt, but that I know alſo how it comes to paſs, that ſome Liquors carry'd beyond Sea, are corrupted: Which therefore, if by the benefit of this trial, the Certainty is made known to me, a good reaſon, and after what manner it may be help'd, may be learn'd of me for a trifle.

16. *To encreaſe the ſtrength of all ſorts of Beer, that they ſhall have equal Virtue with* Rheniſh-*Wine, and yet the Beer loſe nothing of its reliſh, but be both more pleaſant and durable; for when thus order'd, it will not ſo ſoon ſowre; but if it be decay'd, which will happen to Wine in time, the Vinegar which will ariſe from it, will be as good as Wine-Vinegar: fifty R. Dollers.*

17. *To give ſowre Beer its natural ſweetneſs, and in fourteen days to make it ſell for freſh; and ſo, though turn'd three or four times, to make it ſweet in fourteen daies time without fail.*

18. *To produce Vinegar of Bread-Corn, and ſuch other things, very like Wine-Vinegar in all things, without fail; fifty R. Dollers.*

19. *To prepare Vinegar of green woods, an Hundred meaſures daily, together with Oil of Wood, without Charge; but if any man will have this like other Vinegar, it requires rectifying, which will ask ſome time and coſt: Ten R. Dollers.*

20. *Although* Glauber *delivered in a little Tract, a way to make Tartar of the burnt Lees of Wine, yet I have alwaies committed many Errours, by following his very Oral inſtructions, till bethinking my ſelf, I at laſt made it with fruit, and plainly reduced it to Cryſtals.*

NB. *Whoever will follow the Directions of that Tract, may.*

21. *To ſeparate every Oar of Copper with profit, and from thence to produce Gain.*

22. *Of that ſort of Copper Oar, if by chance they have any ☽ from thence, to ſeparate it with fruit, without loſs of the Copper and Lead.*

23. *To ſeparate Lead from Teſts and Cupels, for ſmall Coſt, and as little Labour.*

24. *To ſeparate Gold and Silver by melting.*

25. *To build a Furnace, in which one may both torrifie, melt, and try Metals in the Probations of* Cineritium; *containing the ſmall Trials of an hundred Crucibles, or more, only heat with Wood.*

26. *Further, a Furnace, in which, without Bellows, one may try a good quantity by the Probations of* Cineritium.

And Laſtly, *Foraſmuch as the leſſer Trials have deceived me, if I went to work on a greater quantity, I will teach wherein my chief skill conſiſts.*

1. *In the leſſer trial I have found, that with the Spirit of Wine, as 'tis generally prepar'd, I can make an Anatomy of all Vegetable, Animal, Mineral, and Metallick Subjects, ſeparate their three Principles, make the volatile fix'd, and the fix'd volatile, and force 'em through a Limbeck.*

2. *To force the Anima and Salt of Gold through the Limbeck, and to reduce it, well mix'd with its Spirit and volatile Salt, into a potable body like Vegetable Eſſences.*

But becauſe Gold may be reduced into ſuch a ſort of Eſſence, it will not be very hard to render the imperfect Metals and Minerals, with their Three Principles, potable: and theſe Principles are inſeparable in their volatility; wherefore I doubt not but they may be fix'd.

3. *Furthermore, I have found by ſmall trials the way of taking all Corroſion from all Corroſive Spirits, by this general Spirit, and of reducing them (by the help of Divine Providence) into ſweet Oils or* Menſtruums; *which if it anſwer the deſire in large quantities, (and I don't doubt it)* Glauber *with his* Alkaheſt, *which indeed is not wholly to be deſpis'd, muſt be forc'd to hide: for I have hopes, that by the aſſiſtance of Divine Providence, whatſoever ſubject I ſhall propoſe to my ſelf, I can ſeparate and purge its three Principles; laſtly, join them, and ſo produce a better ſubject and more pure: But 'tis true, ſeeing* I *was ſo often deceived in the leſſer trial,* I *did not interpret it as Truth, but Speculation. However,* I *can effect very well whatever* I *have here ſaid, as well in the great as leſſer.*

4. *But foraſmuch as ſo many excellent, as well as new, Secrets, offer themſelves, that* I *can't chuſe but clearly know them, and therefore 'tis impoſſible that* I *ſhould make all thoſe Secrets abovenamed profitable to my ſelf: And although* I *am now about many things, that hereafter a*

great quantity of them may be expos'd by me to be ſold in pounds and hundreds; yet I ſhall not be ſo envious to refuſe a Communication of them to any man for the named Reward; nor keep from him any knowledge I can give him.

Yet he muſt know, that it is very troubleſome to inſtruct any man that is altogether ignorant and void of skill in Chymiſtry; Therefore whoever will learn any of theſe things of me, let him either come to me, or ſignifie his mind by his Letters, thus: To Chriſtopher Farnner, *Canonicate Quæſtor of* Spire, *&c.*

Theſe are the words of the perfidious *Farnner*, which he hath uſed in his moſt falſe and wicked Writing.

A Specification of thoſe Chymical things.

THis, good Reader, is the Beginning or Preface of that Lying Writing, in which he hath expoſed to Sale thoſe Secrets he had of me, and found good: Beſides, he adds, That thoſe Secrets which he had of me, which do not ſucceed according to his deſire, are not added; but thoſe only whoſe Truth he has found in the trial.

Now we'll open this *Pedler's-Stall*, and look through all its parts, to ſee what is in it.

Theſe words follow:

1. Glauber's *Panacea*;

About which theſe things come to be conſidered.

HEre *Farnner* ſaies my *Panacea*, for the greateſt part, is prepared of *Antimony*; beſides, there are yet two other ſubjects, from which a purer Sulphur may be extracted, than that which is drawn from Antimony: Which vain fancies he may vend, or what elſe he will, I can't hinder him, ſeeing I have taught him to extract nothing but a pure Medicinal Sulphur from Antimony, by the benefit of a ſingular Liquor, which I call *Alkaheſt*. He adds alſo, That he can extract the ſame Sulphur from all ſorts of Metals and Minerals (except ☉ and ☽) and after *Glauber*'s way convert them into Tinctures.

I declare againſt this his firſt Poſition: *Farnner* here ſaith, That *Panacea* may be prepared from Antimony for the moſt part, and promiſes to communicate it to any man that deſires it, for a certain price, to wit, thirty R. Dollers. But thou haſt ſeen, gentle Reader, how ſtrongly he bound himſelf, by his Obligation given to me, to keep ſecret thoſe things I had taught him, and communicate them to no man, under the Penalty of Diſgrace, and the forfeiture of all his Goods. I confeſs indeed, being cajol'd by his frequent ſolicitations, I taught him the way of preparing the *Panacea*, but from no ſubject but Antimony. This *Panacea* of Antimony *Farnner* expoſes to ſale, for thirty R. Dollers; and moreover has taught that Preparation to many, from whence great profit hath redounded to him; when yet this was not lawful for him to do: But he ſhall be forced e're long to give his Reaſons for ſo doing, and I will one day ſee if I can have a remedy for this evil. I will now only ſhew how wicked he has been to me: Wherefore I am compelled to expoſe thoſe ſecrets he had of me and every where makes common, to the view of the whole World, that no man ſhall need to give Money to *Farnner* for 'em, or any other reward, but may come to the knowledge of them for nothing: for if that knowledge is divulg'd by *Farnner*, who unjuſtly, by the publication of it, endeavours to heap up to himſelf Fame and Riches, I may well communicate them to all men faithfully, that every man may ſave his money: But becauſe this *Panacea* is prepared by the benefit of a hot and Saline Liquor, which I call *Alkaheſt*, therefore 'tis neceſſary that he who deſires this *Panacea* ſhould firſt know the Preparation of the Liquor it ſelf, without which he can effect nothing. Indeed it grieves me, and I am very hardly brought to diſcover and divulge to the World ſo excellent a *Menſtruum*, by which ſo many rare Medicaments may be prepared; and I had never done it, had not this perfidious *Farnner* chang'd and adulterated it and its uſe in the Preparation of the abovenamed *Panacea* of Antimony and others, from Minerals, Animals, and Vegetables, and by proſtituting and communicating it to all men. I think him, indeed, a Boar out of the Foreſt, broke into my Garden of Flowers, that has with his ſnout routed up all the many Fruits, which with much ſweat and labour I have planted; but the deed will once be rewarded.

Now follows a very ſhort Deſcription of the Preparation and uſe of that Liquor, needfully requiſite in Vegetable, Animal, and Mineral Medicaments: And though I might teach another and far better way of preparing it, yet there's no neceſſity for throwing all my Pearls before Swine: It is ſufficient, to my ſorrow, that I cannot recal thoſe which this unfaithful *Farnner* has ſent abroad, and am forc'd to behold their deſtruction with the greateſt trouble.

Of the Preparation and Uſe of a certain ſecret Univerſal Menſtruum, *with which one may inſtitute an Anatomy of all Vegetables, Animals, and Metals; correct them, and from thence prepare good Medicaments.*

OF this *Menſtruum* the Modern Philoſopher *Helmont* makes mention in ſome places of his Writings, and attributes wonderful Effects to it, which he exhibits in the Preparation of Medicaments, and gives it the name *Alkaheſt*; which name *Paracelſus* alſo remembers; but in few words, it is the ſame as if we ſhould ſay *Alkali eſt*; for when the Letters *l* and *i* are joyn'd with a daſh, it produces the word *Alkaheſt*. But what moved *Helmont* to call it *Alkaheſt*, we ſhall not here diſpute: I indeed believe he did it, thereby to demonſtrate its Nature and Eſſence; for in German *Alkaheſt* is as Al gar heiß, or Al zu heeß; but in the *Brabantick* Idiotiſm, which was the Mother Tongue of the Author, it ſounds Altho-heeß, that is, very hot; and ſo the name anſwers to the Eſſence; for this Liquor is nothing but a meer fiery Water, by whoſe immenſe and ſecret heat Vegetables, Animals, and Minerals, if they are put into it a certain time, are forthwith purged, ripened, and made better, ſo that they become excellent and wholeſome Medicaments, which without this fiery water cou'd not be done. This *Menſtruum* then, is nothing but an igneous Liquor, prepared of urinous Salts, which is endowed with thoſe Virtues which are attributed to it in my Treatiſe of Flints.

An

An Admonition.

Here it is to be noted, that this *Menſtruum* may be prepar'd of more than one ſubject; for Nature is Copious, and ſets before our eyes many various Ingredients, from which, by the help of Art, divers things may be effected; as may be evidenc'd in this admirable Liquor, which may be made not only of the common *Sal terræ*, or *Salt Peter*, but alſo of the fix'd Salt of all Vegetables, and eſpecially of Tartar; 'tis no matter of what ſubject it is prepared, for it has ſtill the ſame Virtues that are aſcribed to it, foraſmuch as, if a right Preparation be made, the common *Sal terræ* and the fix'd Salt of Vegetables are of one and the ſame Nature and Eſſence: For the genuine *Sal terræ*, or *Salt-Petre*, may be made of Salt of Tartar; and of *Sal terræ*, or Nitre, a fixed Salt, like Salt of Tartar; of Spirit of Wine, Salt of Tartar; and of Salt of Tartar ſpirit of Wine: of Wine-Vinegar, Nitre; and of Nitre, corroſive Vinegar. So thoſe Salts partake of either nature, and will be manag'd at pleaſure; neither are they undeſervedly by the ancient Philoſophers, called Hermaphroditick Salts. Wherefore it is not for any one to be offended at its baſe original, and accordingly undervalue it; 'tis no matter wherein the good conſiſts, 'tis ſufficient to ſay it is good, and may be converted to good uſes: Good things ought to be ſo much the more eſteem'd, by how much the more mean and baſe their original may have been, for Nature and true Art uſe both baſe and abject things in their Works, and nevertheleſs, their deſires are accompliſhed: But on the contrary, the vain reaſon of Man in his labour aims at nothing but Sublimity and ſpecious Notions, and therefore brings nothing to a good end, but deſtitute of a happy ſucceſs, finiſhes his fruitleſs labours with great damage.

To conclude then, take this advice; Be not offended at this wonderful Liquor, becauſe of its mean original, but let the Work praiſe the Work-man.

Now follows the Preparation.

IF any man will prepare this Menſtruum of Salt-Petre, he muſt extract and coagulate that Salt from the earth with common water, and adding coals or ſome other vegetable Sulphur, fix or calcine it ſo long, till it be reſolv'd in the Air into a fiery liquor, then the preparation is finiſhed. But becauſe that ſort of earth, from which this ſalt is extracted, cannot be found every where, in its ſtead, you may take Nitre well cleans'd, which muſt be melted in a Crucible, upon which you muſt caſt a ſmall quantity of coals and that ſo long, till the coals upon the flowing Nitre will take fire no more, but remain dead upon it, for then your Nitre is fix'd and prepar'd, ſo as from it, this ſo admirable water may be made, which is made after this manner; While the fix'd Nitre flows yet in the Crucibele, pour it into a braſs mortar that in that it may cool, then beat it to powder, and ſpread it on a Glaſs table plac'd in the Cellar, or ſome other moiſt place, that there it may flow; ſo you have that fiery water which is endowed with ſo many wonderful virtues in the preparation of medicaments of vegetables, Animals and Minerals, of which I made mention before. But if you wou'd make ſuch a liquor of *Tartar*, which will be beſt for preparation of Medicaments of vegetables and Animals, then you muſt bring common *Tartar* made pure by Calcination, Filtration, Solution and Coagulation, and by flints purg'd from all impurity, into a fair and bright Salt, mixing ſix or eight parts of the pureſt *Tartar* with one part of flints well pulverated, which mixture you muſt melt in a cover'd Crucible, and pour it into a braſs Mortar to cool: This bright and white fiery maſs you muſt reduce into powder and put it into a Glaſs body, and pouring rain water thereon, boil it upon hot Aſhes, for then the rain water will diſſolve the *Tartar* only, and leave the Flints at the bottom, like a Mucilaginous matter which draws to it ſelf all the impurity of the *Tartar*, which before, by the common ſolution and filtration cou'd not be taken away, and ſo keeps it, that the Salt of *Tartar*, is by this means freed and purg'd from all impurity: then you muſt filtrate this ſolution, and draw the water from it by a limbeck, that ſo that Chryſtalline fiery liquor may remain in the Glaſs: And this is that preparation by which vegetables and animals are reduced into the beſt medicaments; but to prepare metallick Medicaments, and eſpecially for the making them better, liquor of *Tartar* is not to be added, but only liquor of the Salt of fix'd Nitre, which is not prepared by coals, but by the Regulus of Antimony, and that after this manner;

Put three parts of clean and pulverated Nitre to one part of Regulus Martis, put this mixture into a Glaſs waſh'd clean, and by a prudent increaſe of fire, make it boil a little in a Fixatory Furnace, and in this degree of fire, leave it five on ſix hours, then take it out that it may cool, then very finely pulverize it, and pour upon it rain water, and the Nitre, which by the Regulus of Antimony comes out fix'd, waſh out; and laſtly abſtract the water, ſo you will produce a fiery liquor fit for uſe in metallick operations.

NB. This fixation may be as well made in cover'd Crucibles, as in Glaſſes, and is good enough, only the management of the fire muſt be obſerved, neither let the heat from the begining be too intenſe, leaſt your Nitre evaporate before it be brought to a fixation, but keep a gentle fire, and it will effect the fixation in conjunction with the Antimony.

The Praxis. How by the mediation of this liquor Vegetables, Animals, and Minerals may be converted into good Medicaments.

TAke an herb, root, or ſeed, beat it very ſmall in a ſtone Mortar, then put it into a glaſs, and pour upon it ſo much of this fiery Menſtruum, as that the herb may be ſufficiently imbrued in it, afterwards ſet it upon ſand ſome days, or boil it, that of the herb and Menſtruum may be made a thick liquor, which done put to it as much ſpirit of Wine, well dephlegmated, as there was of Alkaheſtick Liquor, and well mix them, in a ſmall heat, leſt the ſpirit of Wine evaporate; ſo long digeſt it, till the ſeparation ſhall be made, and your Alkaheſt, with the fæces, will go to the bottom, but the ſpirit of Wine, with the Eſſence and Virtue of the Herb, will ſtay at the top, which afterward, though never ſo much ſtirr'd, will not mix, but each remains ſtill in his own

place: pour all that whole matter into a wide-mouth'd Glaſs, and there let it ſettle; then ſeparate the Medicine which the ſpirit of Wine has extracted from the Herb, with a gentle inclination from the Alkaheſtick Liquor, which retains with it ſelf the fæces of the Herb, ſo you will have the Virtue and Eſſence well corrected and perfectly ripen'd in the ſpirit of Wine, which abſtract from the Eſſence of the herb in a Bath, and the Medicine which remains like a red juice, and endowed with great Virtues, keep and uſe it as it is ordain'd by God and Nature. But the Alkaheſtick Liquor, mixed with the fæces of the Herb, Calcine in an earthen Veſſel, that all the reliſh and ſcent of the Herb, which remains in it, may be exhal'd from it, and afterwards diſſolve it in Water, and filtrate it, and draw it to a fiery Liquor, ſo it will be as good as it was before, and you may put it to the ſame uſes as often as you pleaſe.

Animals are to be bruiſed after the ſame manner in a Stone Mortar, and with the Alkaheſtick Liquor digeſted, and by ſpirit of Wine ſeparated, and in Vegetables the labour is the ſame.

But Metals in their proper Corroſive Menſtruums muſt be diſſolv'd precipitated, waſh'd, edulcorat'd, exſiccated, and then laſtly with the Alkaheſtick liquor poured on, digeſted, diſſolved, and with ſpirit of wine ſeparated and reduc'd into a potability.

But Minerals which may be pulveriz'd need not be diſſolv'd and brought to a calx, but 'tis ſufficient, that after pulveriſation with the Alkaheſtick liquor poured on, they be digeſted, and by ſpirit of wine ſeparated.

Nevertheleſs, you may alſo at your pleaſure render metals brittle and frangible, *viz.* By the help of the Regulus of Antimony, ſo that they may be pulveriz'd, then pouring your Menſtruum upon them, diſſolve, digeſt and convert them into Medicine: Which method is certainly good; You may alſo proceed another way with metals prepar'd by Antimony, *viz.* Mix them with three parts of pure Nitre, and in a Glaſs or earthen veſſel, by the dry way diſſolve, digeſt, fix, and by ſpirit of wine prepare into Medicine, which alſo will be good, for it is more profitable to operate by the dry than by the moiſt way, as it is cuſtomary to be done in vegetables and Animals.

And this is the ſhorteſt method of reducing Animals, Vegetables and Minerals by the Alkaheſtick liquor to the beſt Medicaments.

But how imperfect metals or Minerals, which otherwiſe in a Cupel or Cineritium trial, leave no gold or ſilver behind them, are to be brought to maturity and fix'd, that afterwards in the Cineritious trial, they may give a perfect gold and ſilver is done another way, whoſe proceſs is this:

Mingle and melt ſo much (Regulus) of Antimony with the imperfect metals or minerals as may render them friable, that they may be pulveriz'd, with theſe mix three parts of the pureſt Nitre, and this mixture cloſe ſtopt up, put upon a fire in glaſs or earthen veſſels to fix for ſome hours, afterwards take it off, and as they are melted pour them out, that they may give the regulus which is to be taken away, and with lead put into a Cupel and reduc'd to droſs, then that gold and ſilver which the imperfect metal or Mineral got in the fixation, ſtays in the Cupel which may be examined by the leſſer weights of probation, whence it will appear how great a fixation ſo little time will produce.

This is the plenary and fundamental inſtruction of the uſe of *Tartar* purg'd by flints, to extract the eſſence of vegetables and animals and of Nitre fix'd by coals and Regulus of Antimony, which begets a penetrating, correcting, bettering or ripening and purifying fiery, but not corroſive, virtue, which goes beyond all things, penetrates and corrects as above written, I have attributed to it. But leaſt the ignorant of natural things ſhould eſteem and proclaim this a corroſive liquor, we will prevent them, and ſhall endeavour to demonſtrate, that this liquor is no way a corroſive, but an enemy to and deſtroyer of all corroſives.

Like loves its like, with it is mingl'd, and immutably ſtays with it, as may be ſeen in ſpirit of Salt, Vitriol, Alum, Nitre, Vinegar and other corroſive ſpirits when they are mixed. But unlike things if they are join'd, are contrary to themſelves, and fight againſt each other, and forcibly withſtand one another ſo long, till the ſtrong o'er comes the weak and kills and deſtroys it or produceth another ſubſtance from it: that may be ſeen if this fiery liquor of *Tartar* or Nitre be mix'd with a corroſive Spirit, for it can not conſiſt with it, becauſe contrary to it, then which of theſe is the ſtronger, deſtroys the weaker and takes its nature to it ſelf.

And this difference ariſes from the unlikeneſs of the nature of either liquor, for one corroſive does not deſtroy another, as alſo one fix'd urinous liquor does not deſtroy another urinous liquor; becauſe one contrary fights againſt another contrary, but not againſt his like; ſo 'tis true, as hence may be fully demonſtrated, that this fix'd liquor of *Tartar* or Nitre is not corroſive, but only a fiery water and a perpetual enemy to all corroſives, and both kills and takes away their corroſive faculty from them. But ſome will ſay that the corroſive ſpirits of Salt, Alum, Nitre, Vitriol and ſuch like are fiery waters: I confeſs it, but yet with this diſtinction, thoſe ſpirits are indeed hot waters, but not vivifying, but rather cold and killing fiery waters, which no way ripen, purge or correct Vegetables, Animals and Metals, but deſtroy and kill all things they are mix'd with. But the fix'd liquor of Nitre or *Tartar* is contrary, and ripens, purifies and brings to perfection all it is mix'd with, which is impoſſible to all corroſives, whence it is as clear as the Sun, that it is no deſtroying corroſive, but a correcting fire.

Now follows another Clauſe of *Farnner*'s Epiſtle.

2. *All Mineral's and Metals.*

I much wonder that *Farnner* was not afraid to offer this proceſs to others at a price, which is plainly and clearly deſcribed in many places of my Books: and is done only by Nitre, by which ſulphurous metals (but not all metals and minerals, as he vainly boaſteth) are reduc'd to droſs, from which by ſpirit of wine, a metallick tincture may be extracted, as we have ſhewn above in the tract of the Alkaheſt: that droſs is truly fiery, and therefore eaſily attracts air, and is turn'd into oil, of which I have largely treated in the ſecond and fourth parts of (*Furn.*) and in the *mineral work* eſpecially in the explication of the wonder of the world, as alſo in my Hermetic Colloquies.

3. Glauber's

3. Glauber's *Alkaheſt*.

IN this Paragraph *Farnner* openly betrays his vanity, bragging, and helliſh calumny, in reprehending the induſtry and labour of good men, and boaſteth of a more firm foundation than perhaps I know of; whence it will appear to any man of Underſtanding, what this moſt ungrateful of men would be at, namely, which is the only thing he can do, he would do what he could to bring thoſe Secrets I intruſted him with into contempt with all men, and introduce his own fooliſh trifles.

Firſt, he ſaies, *Glauber*'s *Alkaheſt*, and preſently ſubjoins another and better foundation or way of preparing it: which if he points at any thing but my Alkaheſt, why then does not he forbear mentioning and contemning my Alkaheſt? for he does contemn it, and endeavours to prove, that that way or fundamental is unknown to me. Now he expoſes it to ſale at fifty R. Dollers.

4. *The Trial of all ſorts of Coins.*

'TIs true, *Farnner* did not mention this as a vendible, for it is not worth purchaſing with Money of him: for the common way of trying money has been ſhewn not only by many provers of Metals, as *Lazarus Ercher*, *George Agricola*, and many others, but I my ſelf alſo in many places of my Writings, and eſpecially in my explication of the Wonder of the World, have fully and exactly taught it, which *Farnner* can never be able to mend nor imitate.

5. *Flowers of Coral.*

YOU muſt know what belongs to this Proceſs that *Farnner* did not learn this Preparation of me, but of another man, which pleaſes him extreamly, though 'tis of no moment. But he moſt unworthily calls them Coral Flowers, which he expoſes to ſale at ten R. Dollers, ſeeing they are not Flowers, but rather to be called a Cremor; for when in a very hot fire they are reduced into a white Calx, from this Calx, by the help of Water, is drawn a Cream after this manner: The calcin'd Corals are put into common Water, and left in the Water a whole night, then in the top will appear a little skin, as is uſual in *Calx viva*, which muſt be taken off to dry. Laſtly, while that is doing, another little skin appears, which is alſo to be taken off, and that ſo often, till the Water will give no more.

I know alſo, that this Powder is held up by ſome Apothecaries as a certain ſingular Secret, (but that indeed exceedeth it) which is prepar'd of *Calx viva*, which I have alſo ſhewn to ſome that have attributed great things to this Powder, who, the Experiment being made, ſeeing me produce true things, What need is there, ſaid they, to burn precious Corals, when common Chalk (or *Calx viva*) will give the ſame thing as Corals, and they prepar'd no more Powder of Corals, but of *Calx viva*.

Therefore this does not deſerve to be called a Secret.

NB. That Corals, Pearls, Pearl-ſhells, and Tortoiſe-ſhells, as well thoſe that are in the Sea, as thoſe that are in Running Rivers, if they are burnt together, are brought into a true and natural Lime, like that which is made of burnt Stones, needs no probation. He that will not believe me, let him go to *Holland*, and other Sea-Ports, and he ſhall ſee that the men of thoſe Countries do not uſe Lime made of Stones, which are wanting in thoſe places to build Walls, but that which is made of burnt Shells, which the Sea in great abundance caſts upon the ſhore; which yet, is not ſo good as that which is made of Stones, which ſome Lovers of Curioſity have alſo brought them from *Germany*.

6. *To make melted Tin hard.*

AND this Paragraph, by right, ought to have been omitted, for it is not worth Ten R. Dollers, requiring no Art in the making it; and I my ſelf taught it many years ſince, as well in the Firſt part of the Mineral Work, as in the Fourth part of my Furnaces; and it is made by *Regulus* of Antimony, of which one part is mix'd with 12 parts of melted Tin, and no more, for otherwiſe the Tin would be made brittle, and rendered unuſeful; rather if one part of *Regulus* is mingled with twenty parts of melted Tin, it will come out hard enough. And farther, it may as well and rightly be made of *Zink*, as by *Regulus* of Antimony, and needing no great matter of Labour, melts ſooner than *Regulus* of Antimony.

7. *White Vitrifications.*

THeſe Vitrifications alſo, which he expoſes to ſale at Ten R. Dollers, are of no moment, for they are prepar'd of Glaſs of Lead, Tin-Aſhes, and Flints, and Wood-aſhes.

In *Holland* this Preparation is very common: whether *Farnner* is excellent at it or no, I much doubt; How then ſhall he teach others? And if he does excel, who will be the better for it? For no man ſtudies theſe Curioſities, or ſo much as looks after them, or covets them.

But although Glauber, *&c.*

Here *Farnner* again vomits at me a mighty heap of his infernal Lyes, which are as noiſome as any dead Carcaſs, as if he intended to infect me with their venom; but theſe ſtories do not at all agree with his other; for here he ſaies, Although he had with a great Sum of Money purchaſed certain Secrets of Glauber, yet he had made no Examen of them, but he was forc'd to convert them to other uſes. In the beginning of his Calumnious Paper, he thus writes: A Specification of thoſe Chymical Secrets which the under-written Farnner learn'd of Glauber, and in the Trial found True.

Here any impartial man may ſee what to judge of this double-Tongu'd Monſter. Here he denies what before he confeſs'd; he both calls them *Glauber*'s Secrets, and here affirms, that they never ſucceeded to his purpoſe: which if true, Why does he prefix my Name to them, if he never made trial of them? But if they have ſucceeded, and in the trial he has found 'em true, as he above confeſſes, Why does he here deny it? Can the ſame thing be True in one place, and Falſe in another? Certainly I can refute ſuch horrid Lyes no way better than by his own words. For if I ſhould ſay, See here, there, or in that place thou lyeſt, he would not care, but anſwer, He did not lye at all, but ſpake the truth; and I might repreſent a Conteſt between two ſcolding Women, one whereof calling the other Whore, and the other throwing back upon her the ſame things; but this will do nothing; wherefore I ſhall take another method.

In the first Obligation he gave me, he expresly saies, That I had communicated, demonstrated, and shewn him some Secrets: But if they were not for his use, why did he give me a valid Obligation, to keep those secrets from the publick? Not bent to these things, Why did he in all his Letters (which he sent me, and which are kept safe to confirm what I say) confess, and profess, that he, his Wife and Children, were bound to me, and that he wou'd come to me, that with his he might serve me all my Life.

If none of my secrets have succeeded to him, Why did he give me long since a new Obligation to be grateful to me? as I have demonstrated from his obligations and extracts out of his Epistles.

NB. What! Cou'd he not make trial of those things he had of me, in eighteen Months time? But if the trial has prov'd the truth of those things, and he has bound himself to me by a new Obligation; Why then does he dare to say, That none of those things which I communicated to him, prov'd successful? Why two years after? Now he is alienated from me, and having broken his Promises of coming to me, and working with me in my Laboratory, (being married again) is an Excuse for his absenting himself, yet he asks me to communicate to him more secrets, and then he'll come. *NB.* But if the first secrets have not stood the Test, why does he desire more of me?

For he might know over and over in two years time, whether my Writings wou'd conduce to him or not.

In one Epistle, in which he boasts of killing a man, he writes thus: Wherefore I again and again intreat you not to cast me off, but do to me according to your wonted Favour. I will on all occasions, as I have promised, in my place, satisfie you; neither will I cause that any thing should therein be desir'd; for which reason also I will effect it both better and sooner.

From these and the like words, which in two Epistles he us'd to me, I could collect nothing of Fraud, and perhaps at that time he meant none. But when he had kill'd that Man, and married another Wife, all his Promises and Obligations were to no purpose. And from that very time, all his endeavours have tended only to do me what hurt he could, and he daily hates me more and more; which at last appears more publick in these his lying Calumnies.

Indeed, I am apt to think the Devil and *that Murder* had possessed his Heart. NB. For his Epistle to me witnesseth, that for fourteen daies together he had sought occasion how he might catch that man with his Wife, and bloodily revenge himself upon him; I suppose, by the instigation of Satan, whereby both the Man was kill'd in his Sins, and the Woman with many wounds compell'd to a lewd kind of Life; of both which Crimes *Farnner* is yet guilty in his own Conscience, and (unless a speedy Repentance follow on his part) he will never be freed from them. But if in a sudden passion he had done it by chance, he might merit some excuse.

But to endeavour it fourteen daies together, is nothing but a Devilish Revenge and Cruelty, which can by no means be excus'd in a Christian, though he do it never so secretly.

But besides, he uses evil Arts; for he drew my Servant to him by Flattery, and receiv'd him into his intimate friendship, notwithstanding he knew I turn'd him away for his infidelity. What he writes, that he bought his Secrets of me at a great price, is a pure falsity. Indeed he forc'd a small Reward upon me, half of which I gave him back again, and what I kept he got over and over by communicating my Secrets to other men, so that he has fully receiv'd what he gave me; and by this his communicating to others, (which was done unknown to me) he broke his Promise; which nevertheless for Peace sake I passed by. Wherefore, if he will confess the Truth, I am sure he can never say that he bought all those Secrets I intrusted him with, at so great a price.

Hitherto we may believe how much Money has come to him; for since he has sent abroad his institory Letters five months ago, (nay, as I am told, two years ago) before I could know it: he could not chuse but get money by it, when forthwith he with my perfidious Servant proceeded to that insolence, as in a knit Society with some of *Frankford*, he caused his Calumnies to be every where spread, and sent abroad, not only througout upper *Germany* and *Belgia*, but also into *France*, and other Foreign Countries, to get Money. Yet, according to my hopes, this instítory Ware-house (by the Grace of GOD) will soon fall.

8. *Plenty of Spirit of Salt.*

IN this Paragraph also he goes on after his manner to disgrace me, accusing me of Lyes, as if it was false, and impossible to prepare fifty pound of Spirit of Salt in one Furnace, and in one day; and adds, that this Spirit is not so good as his, for *Every man for himself:* but this is done by adding Vitriol.

Which Vitriol does not hurt the Spirit of Salt, as is demonstrated in many places of the First Part of my Furnaces; and he denies that fifty pound or above may be prepar'd in one day in my Furnaces, when yet it may be done commodiously enough, and needs no farther proof.

From all which a wise man may easily judge how good a Christian *Farnner* is, whose mouth uttereth nothing but wickedness, contempt, and contention, and except my inward faculties fail me, the envy of his heart, his hatred, lyes, and infernal calumnies, shall be display'd.

What is his spirit of Salt to me, or mine to him? Let him prepare it after his way, and I will do it my way, when need requires: Wherefore does he endeavour to defile my things with his, since they cannot be deservedly reprehended by any man, much less by him.

9. *Spirits of Vitriol, Nitre, Salt, Aqua fortis, Aqua Regia, in plenty; also Sulphur; at Forty R. Dollers.*

IN this place may be seen the inhumane and devilish nature of this wicked fellow; for he scarce utters three words but he proceeds to my disparagement.

But what hath *Glauber* to do with his spirits, for he does not use them? and if he does need them, he can make them without him.

What does he care, if you can prepare them after a better way than he, which yet never can be?

Whatever *Glauber* has writ of these things is worth the reading; and he can defend both himself and it, neither

neither can you or yours ſpot his fame, which is ſo well known to the World.

10. *Mineral Spirits: for twenty R. Dollers.*

HEre *Farnner* ventures to promiſe a way of preparing volatile ſpirits, which is eight years ſince fully deſcribed by *Glauber*, in the ſecond part of his Furnaces, whither I referr the Reader.

11. *Flowers of Minerals and Metals; for Twenty R. Dollers.*

BUt if any man will explore another man's nature, let him permit him to ſpeak, and he ſhall eaſily know what temper he's of; but eſpecially that, of all things, may eaſily be diſcern'd in a drunken or angry man, who can very hardly conceal his internal blemiſhes. In like manner we may ſee by *Farnner* that he endeavours to hide his lying Proceedings in my name. What if I had ſeen his way of preparing metallick flowers, what profit or loſs ſhould I ſuſtain by it? He glories of thoſe things which merit no praiſe. He promiſes to make metallick Flowers under a frixatory Cover, when yet Flowers can't be made under it, for they are not Flowers when the metals are burnt under a frixatory Cover, into a Calx, or reduc'd to aſhes, there is, and ſo remains a heavy Calx: but the Flowers of metals ſhou'd be brought to a very light ſort of Flowers by Sublimation; as is deſcrib'd at large in the Firſt Part of my Furnaces.

Farnner indeed, with his Shop, leaving his filthy knife, ſhould rather have gone to the Chymical School a little, than (being ignorant of Chymical terms) ſold his heavy Calxes of Metals to other men for light Flowers, and deſpiſed *Glauber*'s way of preparing Flowers, which yet has been reprehended by no man. Theſe his Flowers, with his Coral Flowers, are courſe Meal, which don't deſerve the name of Flowers, but Cream. Indeed, if *Farnner* had not ſo vehemently inveighed againſt me, I had not diſplay'd him thus, nor deign'd his vain Proceedings one word of anſwer.

Yet 'tis no matter, though good men are ſometimes in this life bark'd at, and provok'd by mad Dogs, ſince it often happens that by this means excellent things are made publick, which otherwiſe would lie ſecret.

12. *The Quinteſſence.*

HEre you may ſee, candid Reader, that wicked *Farnner*'s endeavours tend to diſturb the quiet of all good men, and deſtroy my well-grounded and yet irrefutable Writings by his fooliſh Opinions, which he ſhall never be able to do, no more than a little Whelp is able to attack an armed man, whom by his barking he cannot hurt.

My Tract which I writ of the Eſſence of Vegetables, and printed at *Norimberg*, under the Title of *The Firſt Part of the* Spagyrick Pharmacopæa; neither *Farnner*, nor any man elſe, could reject or contemn; but that little Tract will defend it ſelf.

I have made publick many and excellent inventions, but no man can ſhew one place wherein I reprehended and brought into contempt other mens Works, as this *Farnner* does. If he would act as a good man ought, and had any thing againſt me, he ſhould ſpeak it to my face, and not abuſe me ſo wickedly behind my back.

13. *All acid Wines.*

IT troubles me Indeed, that I communicated this excellent ſecret of encreaſing the Virtue of acid Wines, and making them better, to *Farnner*. What he writes, that he found out thoſe things, is a pure Lye, which he had of me; when nevertheleſs he is not afraid to tell ſo impudent a Lye, as that he had found out a better foundation of that Secret, which is moſt notoriouſly falſe; for neither he nor any other man, nor I my ſelf, can find any thing better than the pure Eſſence of Wine, conducing to that Work; which Eſſence of Wine, by the ſtrength of its innate fiery Nature and Property, all ſorts of immature Wines may be ripen'd in fermentation, and turn'd to a brisk Staple, and good Wine, in which lies all the Art.

For he that knows this, may alſo correct acid Wines, yet let him have a care that he does not take foul Brandy-wine, as *Farnner* has done, wherewith he has done it, as he ſaies.

This excellent Art, and heretofore unknown, to him that knows how to handle Wines, may ſerve inſtead of many; and this unfaithful *Farnner* might have receiv'd much profit from it, if he had not made it publick; but ſince he has every where publiſh'd it, there ſhall henceforth no profit accrue to him nor me, if I ſhould be deſtitute of better things, for he has defamed this excellent Secret every where by his lying Epiſtles ſent abroad.

As for me, though he has taken from me the great profit which redounded to me from it, by his prating and lyes, I do not this from ſuch a trouble of mind as will happen to him, if he ſhall be forced indeed to want all its fruit.

If this perfidious *Farnner* had hid this Secret, he would have needed no other Arts, neither need he have ſold it for an hundred Duckets, but he might from it have procur'd to himſelf ſufficient whereon to live. A greater damage has happen'd to me by his publication than I can declare; and I very hardly endure that ſo excellent and profitable a Secret ſhould be deſpiſed; neither will any good man approve it, eſpecially they that ſuſtain loſs by it, and for that cauſe will alwaies abhorr him. He might have gotten enough by it, in ſecret, and without detriment to his Neighbour, but that he was minded rather to marr the profit and propagate the damage of not only himſelf, but me, and many others that have knowledge of it; which no man can deny to be a wicked act.

That Reward which *Farnner* gave me for communicating to him my Secrets, in all amounted to but ſixty or ſeventy *Ungarici* (an *Ungaricus* is Nine Shillings of our Money,) which yet, from the communication of thoſe Secrets I truſted him with, he receiv'd again; ſo that all thoſe things which he had of me, coſt him little or nothing. Nevertheleſs, he does not ſtick ro ſay, That he gave me a great ſum of Money for my Secrets, which yet I refuſed to take; and though he twice made a Journey of Fifteen miles to me, that he might get ſomething out of me, yet I deny'd him, and communicated nothing to him, till he came the third time, and learn'd ſome of my Secrets; and afterwards, when he had oblig'd himſelf to work with me in my Laboratory, I communicated more to him. Neither had I ſhew'd him the leaſt of thoſe many Secrets for his Preſent, which will never compenſate

the damage I have ſuſtain'd by him, had not he oblig'd himſelf under the loſs of all his Goods, as alſo his Credit and Reputation, that he, his Wife and Children, ſhould ſerve me ſo long as I ſhould live, as plainly appears from his Obligations given to me.

But if he had given me a Thouſand *Ungarici*, or Duckets, and I had known he would have expos'd this Secret to ſale, I would rather have given him all of it back again, than ſuffer'd it to be made common. Neither can his vain Excuſe, That he expoſes his own inventions, and not mine, to ſale, profit him any thing; when 'tis evident enough, that nothing in the nature of things can be found, which may render ſmall Wines better than the *Anima* or Quinteſſence extracted from other Wines; for the *Anima* of Wine only, and nothing elſe, can encreaſe the ſtrength of Wine. Neither is the compariſon of this melioration of Wines incongruous with two torn Garments, neither of which can be worn; but if either of this is cut, and that which yet is whole and good, is ſewed to the other, and ſo of two torn, one whole Garment is made; then that Garment may be worn, when yet, before, neither of them was uſeful.

The ſame alſo is to be underſtood of ſmall wines that are neither durable nor vendible, but after one Hogſhead is ſtrengthen'd by another, it becomes not only durable, as good Wine, but vendible, and will yield as good a price as two ſmall Hogſheads. And this Secret is both very noble and profitable in thoſe places, where the wines are ſeldom brought to maturity, and for that cauſe are not durable nor ſaleable. For there is a lamentable Complaint among Vintners, that immature wines are not vendible, and they can get no money for them. Thus they ſay, Have we labour'd in vain with our wines a whole year? Look there the wines lie, and no man buys them: in the mean while we ſuffer want and can't make our ſelves merry with our wines, for they neither profit us nor others; unleſs we have preſently ſome other better wine, wherewith to mingle this, and ſo render it vendible, it will ſtrait be corrupted, and turn'd to water. Theſe and the like Complaints I have often heard from Vintners; but if they had the wit of Taylors, that can make one new Garment of two old ones, their affairs would be in a better condition, for after this manner they might preſerve their acid wines, and there would be no need of mixing better wine with them. For which excellent Invention, all men that deal in wines, ought to thank GOD and me.

I pray, who would not have communicated theſe things to a man that had given himſelf for a pledge? But if he muſt not ſtand to theſe Obligations, I can't ſee whom we may truſt. I curſe the unhappy hour wherein this unprofitable ſubject and that perverſe man (if he may be call'd a man) came firſt in my ſight: which troubles and moleſtations he brings upon me in my old Age, which might ſpend its time much better, than by refuting his deteſtable Calumnies. Neither does his wickedneſs to me hurt me only, but my Children alſo.

In his laſt Obligation he promiſes, That if by premature death I ſhould be taken out of the world, that he, for the kindneſſes I had done him, would adopt my Children for his own, and make them his Heirs: but here, in his moſt falſe writing, endeavours all he can to deprive my (yet young) Children of their own, and convert their Goods to himſelf, as indeed he has done.

Further, He in his laſt Obligation alſo ſaies, he humbly pray'd GOD to prolong my Life and Health, but in this place he endeavours by his Cavils and Calumnies to kill me, and if he could do it with his own hand, (which God forbid) I believe he would not ſtick at it: It is a ſmall thing with him to ſpill Man's blood, for he has experienc'd his ability that way.

I indeed eſteem it the Goodneſs of God to me, that it is His will, perhaps, that this ſhould rather turn to my profit than diſadvantage; for hereby I am taught to be wiſer another time, and to ſhun humane Frauds.

14. *All Wines.*

HEre any wiſe man may judge whether or no this thing deſerves to be ſent into Foreign Countries, and there to be ſold at a price; when there is no Country-man that does not know that Wine aſſumes the reliſh of the Herbs, Flowers, *&c.* which are ſteeped in it.

15. *Brandy-Wine of all ſorts of Corn.*

THat *Farnner* brags of this knowledge, he owes it to GOD and me, from whom he had it: For when at firſt he complain'd to me, that he could not keep the Corn from burning in the Still, and ſo make the Brandy-wine ſtink, I upon his intreaty communicated this Secret to him. But becauſe *Farnner* ſo much glories of this knowledge, he ſhall not enjoy it long. I muſt confeſs, indeed, that this Secret is not of leſs value than that whereby wines are meliorated; neither does he get leſs by it: but foraſmuch as I reſolve to buy all his Wares every where of him, I will neither leave him this, that he ſhould be free from the trouble of informing others in this thing, and that otherwiſe would be forced to make long Journeys to buy them of him, may leave off thoſe Journeys, and take this way of preparing it: Take as much Corn as you will, whether Barley, Rye, Oats, or Wheat, ſteep it in ſweet water for ſome days, then place it that it may ſprout after the ſame manner as Corn is Malted for the making of Beer; turn it well for a certain time, leſt it be corrupted by too much heat: then when it is well ſprouted, ſpread it abroad, that it may preſently cool, and it will never ſowre.

But if you would uſe it preſently, then take as much of it as your Deſtillation will require, and in a Kettle full of water, boil it ſo long, till the grains are broken, then pour it into a wooden Veſſel, and when it is luke-warm, add to it the freſh dreggs or grounds of Beer, and let it ferment; when it has fermented enough, which is uſually at the end of two or three daies, then Brandy-wine is made in a common Still, by deſtillation from that Corn; what remains in the Still will ſerve to feed Oxen, Cows, Hoggs, or other Cattel.

But the Brandy-wine which proceeds from thence, muſt be rectified, as the way is, and by this means it is render'd more ſweet and grateful to the reliſh, than any other Brandy made of Corn: the reaſon is this, That all Bread-Corn, of which Brandy-wine ought to be prepared, if it be put to ferment preſently after ſoftening, it is neceſſarily in the ſtill, by boiling, redu-

reduced into a pap, and ſo being corrupted by a duſtion, produces a ſtinking Brandy-wine.

But this protuberating and burſt Corn cannot be burnt, and therefore makes good Brandy.

Alſo the Corn may be broken on a Mill-ſtone, water poured upon it, and diſtilled out of a Still, placed within another, or in a Kettle full of water, ſo alſo it cannot be burnt; yet this way it will yield but little.

NB. But if any man will give this Brandy a reliſh, like that made of the Lees of Wine, then he muſt rectifie it upon the Lees of Wine, for this way by the Oil of Wine, which is plentiful among the Lees, he acquires his ends, and in all things he may uſe this inſtead of that.

NB. Alſo, he that will, may, without this previous coction and fermentation, pour the budding Corn hot into a veſſel of luke-warm water, for by this means the Corn begins to ferment of it ſelf, and needs no other Lees to its fermentation; yet it does not produce ſo ſweet a Brandy, as if it had firſt been boiled: for by coction the ill taſte is taken from the Corn, which the Brandy otherwiſe retains. Further, alſo it produces much more Brandy, if the Corn is ſo boil'd, that it may be broken. And this, good Reader, is a moſt excellent and profitable Secret, and will bring you in much wealth, if you uſe it rightly, and you may make great quantities of it.

Farnner did no man wrong, by taking (according to his own eſtimation) a Hundred Duckets for it, for it is worth much more, eſpecially if the reſidue of the Corn pays the charge. Yet no man hereafter will give him ſo much for it now 'tis made publick.

Indeed it is injurious to me to divulge it, but becauſe it is now in the foul hands of *Farnner*, 'tis better that others alſo enjoy it, than that he only ſhould reap the benefit of it. But though by my communication *Farnner* ſhould put on a Lyons skin for his defence, yet he can't hide his Aſſes ears under it; as appears from this Paragraph, where he writes, that he had ſent four meaſures croſs the Seas, to try if they wou'd bear the Sea-water; for then he thinketh he hath made his Port. Good God! how reſplendant is the Wiſdom and Philoſophy of this *Farnner*! Certainly, if he ſhall make one or two Experiments of this kind, that his Brandy-wine will bear the water, he'll duly merit to be created the chief Profeſſor in the Academy of Idiots, for that will befit him, ſeeing that the reaſon is not hid to him, as he writes; wherefore Drinks are alter'd by the Sea-waters.

But he will make his firſt Experiment in theſe four meaſures, and if it proves well, then he promiſes to teach this Art at a price.

O the blindneſs of this perverſe World ſwelling with Pride! Who ever heard that a good burning ſpirit, whether made of Wine or Corn, will be corrupted by the ſea-water? I grant it may be corrupted, if it be invalid before: But a good and firm burning ſpirit will never be corrupted by ſea, for all wines bear the water, thoſe only excepted which labour with a defect of ſpirit, but ſtrong wines very ſeldom, for the more ſpirits there is in any Liquor, whether Wine, Beer, or Metheglin, it is in the leſs danger of being corrupted.

But if the ſpirit which is in wine, be its preſerver, and defender from Corruption, How comes it to paſs that Brandy-wine, which if well prepar'd, is nothing but ſpirit, ſhould be corrupted? If the Spirit in wine be the Preſerver and Defence of the wine, which yet is weaken'd by a great quantity of water, ſo as the wine remains good, and is ſafe from the corruption of water: Why then ſhould not it defend it ſelf, ſince it is ſo ſtrong and free from water? Who doubts that a concentrated Life is able to perform greater things than a diffuſe and weak life?

Hence you may ſee how great knowledge *Farnner* has drawn from the light of Nature, that he ſhould boaſt ſo.

16. *To ſtrengthen all ſorts of Beers.*

IN this place *Farnner* again ſhews his Aſſes ears, when he writes, That he can ſtrengthen Beers, that they ſhall not be inferiour to Rheniſh wine. Here every wiſe man may diſcern how great and ſtupendious this man's folly is.

Behold, he attributeth the goodneſs of Rheniſh Wine to its ſtrength, which indeed is a great errour; for the goodneſs of Rheniſh-wines conſiſts not in their ſtrength, but ſweetneſs. French Wines are far more fragrant than Rheniſh, yet in ſweetneſs and ſoundneſs it comes not near it. So likewiſe *Hungarian*, *Greek*, *Italian*, and *Spaniſh* Wines, *&c.* are much ſtronger, but for ſweetneſs, as well as goodneſs and wholſomeneſs, Rheniſh wine, far better, although the other excell it in ſtrength. And ſo this is a great abſurdity: Indeed Beer may be ſtrengthen'd, by adding a burning ſpirit to it in fermentation, whereby it may endure the longer; which thing I can't deny, and it ought to be done: but that a Vinegar may be drawn from them like Wine-Vinegar, is a pure ſtory; for though it may happen that Beer may give a ſtrong Vinegar, yet it never yields Wine-Vinegar, for a great difference may be diſcern'd between Wine and Beer-Vinegar, though they have both the ſame ſtrength, if you make trial of both: Whence it appears, that *Farnner* is ignorant what Vinegar is, becauſe he knows not the difference of it.

Strong and right Wine-Vinegar is known by theſe Trials. Firſt, if it be ſhaked in a Glaſs, it by and by receives its clearneſs, and leaves no ſcum, dreggs, or bubbles, on the top, as Beer-Vinegar does: for let it be never ſo ſtrong, it retains its own nature, and cauſes a ſcum, if it be ſhook juſt as the Beer it is made of: but Wine-Vinegar leaves no ſcum. Secondly, the longer Wine-Vinegar is boiled, the ſtronger it is; the reaſon is this, There is naturally in it an innate ſharpneſs, which is not volatile; but the ſharpneſs of Beer-Vinegar conſiſts in its volatility, which in boiling is abated; ſo that the longer it boils, the weaker it is. And theſe are the two chief and moſt certain trials of Vinegars, which *Farnner*'s Vinegar will never bear, and therefore will ſtill be Beer-Vinegar, and does not deſerve that it's Preparation ſhould yield Fifty R. Dollers.

Acid or Sower Beers.

WHat belongs to this, requires nothing of Art, neither is it worthy to be taught at a price when every Country man can do it, by projecting and well ſtirring in a veſſel of acid beer, two or three handfuls of beech aſhes well ſifted, made wet with a little beer, and leting them lie in it about eight days, for then the aſhes by reaſon of the Salt which is in 'em takes away the ſowreneſs of the beer, and make it drinkable.

NB. If the beer be not too ſowre, a handful of ſifted aſhes may be ſewed up in a linen bagg, and put into the Beer through the bung, and there left

for this way the Beer may be preſerv'd from ſowreing and need not be ſtirred nor troubled. Alſo ſome handfuls of wheat put into the beer, draws its ſowerneſs from it, the ſame alſo is done by egg ſhells, Crabs eyes, Tortoiſe ſhells, Sea ſhells, calx *viva*, and ſuch like things which attract the ſharpneſs, and turn it into ſweetneſs.

But whence is it that *Farnner* now ſo abounds in the knowledge of wines and beers, when yet but two years ſince, when he prepar'd and ſold brandy wine and beer, that he complain'd to me, that he had ſuſtained much damage in handling them, ſo that he ſhou'd periſh unleſs he learn'd how to take away and remedy the burning of Corn in the Still, the ill ſmell of his brandy wine and the ſowreneſs of Beer. Why cou'd not he then help himſelf, and beware of thoſe Loſſes? he will object that at that time a certain light ſhone upon him, by whoſe benefit he knew Nature. However true his objection be, it will never induce me to believe that this light cou'd in ſo great a meaſure ſo ſuddenly help him, which is a great abſurdity: for ſo much knowledge is given to no man in a nights ſleep, it is a falſe ſtory. But that my faithful inſtruction, with which I inſtructed him, has enlighten'd him, and like a guiding ſtar led him in the right way, is moſt true, tho he is unworthy of thoſe precious Pearls which like a wild boar he treads in the dirt under his feet.

18. *Vinegar of Corn.*

WHat belongs to this Paragraph, is demonſtrated in the ſixteenth paragraph, that tis impoſſible to make a vinegar of Corn, like that of wine: wherefore this cannot (as he thinks, deſerve fifty R. Dollers.

19. *Vinegar of green Woods.*

INdeed I wonder that *Farnner* is not aſhamed of theſe things which I have many years ſince ſo clearly deſcrib'd or to bring them to light anew, that he might get money by teaching thoſe things to others, which are already publiſhed in the firſt part of *Furnaces*, And ſo he adorns himſelf with other mens Feathers.

But he will object, I have in the trial found theſe things true, and therefore deſcribe them, but he does it to this end, and to no other than that he may cheat them of their mony who did not know that I had ſo long ſince writ of them. He that deſires any of theſe things, may find 'em in the firſt part of my *Furnaces*, and he ſhall not need to give *Farnner*, ten R. Dollers for his inſtruction herein.

20. *Altho* Glauber, *&c.*

HEre he contemns my way of extracting *Tartar* from the lees of wine, when yet it was a year ſince clearly and perſpicuouſly deſcrib'd and publiſhed at *Norimberg*, which *Farnner* cou'd never correct. But he bragg'd that he had found by a certain poſition another compendium, which indeed might be, ſince it is eaſier to add ſomething to an Art once found, than to find the Art it ſelf, but it does not become him to diſſwade men from this Art which is already deſcribed, and which may be had gratis, and to deſpiſe it and bragge among all men of his own inventing a better. What good men will think of theſe bold malignities may be eaſily judg'd: but if I had writ nothing of theſe things, who would havee taught him that there was *Tartar* in the lees of wine? But I not only found and writ what was in them, but alſo largely taught how they might be uſefully extracted.

Yet this trifler dares as impudently, as falſly ſay, that he had corrected it, and added to it, and therefore wou'd not let it go without his price.

After the ſame manner he deals with my other ſecrets (which, tho he had them of me, he braggs that they are his own) with which he proceeds, as with the lees of wine, namely with my Alkaheſt, Panacæa, Melioration of wine, compendious diſtillation of Corn, preparation of vinegar, correction of beer and others in many places.

Whence cou'd he have known what was meant by my Alkaheſt and Panacæa, or how ſmall wines and and beers ſhould be meliorated, how Corn without aduſtion ſhou'd give plenty of burning ſpirit, and whether there was *Tartar* in the lees of wine or not, and how it might be extracted thence, except he had ſeen and learn'd all theſe things of me? of which alſo I had many years ſince publickly made mention in my writings, which is ſo well known that he cannot deny it, how much ſoever he oppoſes the truth.

21. *All Copper Ores.*

IN this place *Farnner* teaches that Copper Ores are to be ſeparated, when, yet they are not ſeparated but melted, that thence the Copper may come forth, which Copper if it contains ſilver being mix'd with a due weight of lead, it is ſeparated: but Mines of copper are never ſeparated, which he does not underſtand, and ſo he betrays his ignorance in theſe terms. This way of ſeparating is ſufficiently known, and every where where copper mines are found, is wrought in abundance and cannot be hid. He that poſſeſſeth Copper mines, will eaſily find men that will thence elicite the copper, and afterwards ſeparate it, neither will any man need to go to *Farnner* on that account. Indeed I wonder at his extream impudence, that he was not afraid to promiſe that he wou'd teach others ſo many Sciences, of which if he knew the half part, his village wou'd not hold all the furnaces he wou'd need for the demonſtration of them.

Further, for theſe and the followiug Sciences, which yet; are the moſt difficult and laborious of all, he requires no money, but for a certain reward promiſes to demonſtrate them all.

22. *From Teſts and Cupels.*

HE has drawn this ſeparation alſo from my writings, that therewith he might fill his calumnious letters: neither do I believe he cou'd do it before he had ſeen me do it. It is done by the powder of coals, as I have plainly deſcribed in my Chymical Colloquie.

23. *Gold and Silver.*

THis Art Lazarus Ercker has deſcribed, but becauſe his way is too hard, I have ſhewn an eaſier in the explication of the wonder of the world, and there the following melting Furnaces are alſo deſcribed, and therefore I need not ſay any thing of them here.

All

All theſe inventions which *Farnner* braggs off as his own, are mine; for my unfaithful Servant taught *Farnner* thoſe Furnaces which he learn'd of me.

And at length,

I have nothing to ſay to theſe four laſt paragraphs, becauſe they don't concern me as the former doe, and *Farnner* himſelf expoſes them as ſpeculations and not as experiments, as I alſo believe that they are only fancies and fooliſh imaginations: yet there is one thing which I muſt anſwer, which he mentions in his third paragraph, that the time will come when *Glauber*'s Alkaheſt muſt be forc'd to hide, altho it is not wholly to be rejected. But if it be ſo unprofitable that it muſt hide, why does he expoſe this to ſale at fifty R. Dollers, and the Panacæa which is prepar'd with it, at thirty? and he has already got ſufficiently by it: if it be ſo improffitable, why then does he offer to Sell it to others knowingly and willingly at a price? If *Farnner* has rightly term'd my Alkaheſt unuſeful and muſt be forc'd to hide, he has ſurely deceiv'd many. But I confidently aſſert, that my Alkaheſt will never hide, but defend it ſelf in all places: Perfidious calumniators, thieves and their accomplices ſhall hide, but not my Alkaheſt. If he has found out better things than I, let him publiſh them as I have done, that every man may judge whether they be true or falſe: Why this boaſting and wicked vanity in deſpiſing others? For truth needs few words and leſs braging. In his writing in which he ſets down the value of every Secret contain'd in the laſt paragraphs, namely, from the twenty firſt to the twenty eighth, he promiſes to teach other men for no certain price, but on courteſy, thoſe ſecrets which yet are the beſt, if he cou'd know them. But if he can effect thoſe things and teach 'em to others, he wou'd not certainly teach them gratis, for 'tis impoſſible for him to build thoſe Furnaces requiſite to the making of thoſe things in half a years time.

From which it ſufficiently appears how ignorant he is of what he writes: Certainly if his wares which he had of me gratis, ſhould find Chapmen, no doubt but in one year he would get ſome thouſands of ducats.

I thought fit to anſwer you theſe things now, that I might ſhut your foul mouth which was ſo wide open to lyes, but if after this you don't ceaſe your lyes and calumnies, you will compel me to uſe other means to bridle your malice. In the mean while I doubt not, but all good men in this ſhort Apology (in which I have not refuted thy lying calumnies with indecent or contentious words, but from thy own obligations and hand writing) will plainly ſee how wickedly and perfidiouſly thou haſt behaved thy ſelf towards me. This damage which thou haſt done me, neither you nor all yours both preſent and future faculties, nor all thy ſervants can ever repair: It remains therefore, that I ſay with Job, God gave, and God has taken away, bleſſed be the name of the Lord. But I don't believe you will eſcape divine puniſhment, to which I commit my cauſe at this time. It is certain that every thing has its time, which I alſo patiently expecting your downfal (when God ſhall take upon him the patronage of a juſt cauſe,) perhaps with theſe my eyes ſhall ſooner ſee than hope. Indeed I wanted not matter to diſpute theſe things more largely, but that for a reaſon known to my ſelf, I was hinder'd in doing it at this time. But as ſoon as I can, God aſſiſting me, I ſhall not be wanting to propoſe to all impartial men in the world, queſtions to be reſolv'd, from which every ingenious and good man may ſee, animadvert and give judgment, how ungrateful, perfidious, unjuſt and inhumane thou haſt been to me.

Miraculum Mundi;

Or, A Plain and Perfect Deſcription of the admirable Nature and Property of that moſt powerful Subject, called by the Antients,

The Univerſal Menſtruum,

OR,

The MERCURY of PHILOSOPHERS.

By which *Vegetables*, *Animals*, and *Minerals* may eaſily be Tranſmuted into moſt Salubrious Medicines, and the Imperfect Metals into Perfect and Permanent.

A Preface to the Reader.

TO whomſoever this little Book (treating of the Propriety, Nature, and Eſſence of that incomparable Subject, by the ancient Philoſophers called, The Univerſal Menſtruum *or* Solvent, *ſhall occurr, and is offended in reading of thoſe great virtues by me aſcribed to it; and becauſe he underſtandeth not the thing, judgeth it not to be credited; I would have him know, that whatſoever power I have attributed to it, that that is in no wiſe a Figment, Dream, or vain Opinion, but to be taken for a Truth, found out by a diligent and manifold Practice. But which will be moſt profitable, for me to proſtitute all my inventions to the World, or conceal them?*

them? For which cause I will (at least for the present) only point at many wonderful things which may be performed by this universal Menstruum, but not treat of them, leaving it free for every man to believe my sayings as far as he pleaseth; but if they shall be credited by no man, it shall not disturb me, it being sufficient for me to have shewed where and by what reason, the truth or secrets of nature are to be found.

As for the Subject whose nature and operations I have determined to touch upon, it is like to that of which I have made mention in my Mineral work, *by the signal name of* Alkaheſt, *which appellation I have there demonstrated, not to be imposed upon it without reason. But seeing that long since the chief Menstruums of some Philosophers, were called by the same name, and that I know not whether theirs were like to mine or mine to theirs in nature and virtues, shall not much trouble me; for it matters little for diverse Menstruums to be called by the same name, although they do not answer one another in all things. For even as wine is wine, although it come from* Germany, Italy, France *or* Spain, *nevertheless each is wine, although the one exceed the other in strength and rellish, as long as the same nature and virtues are found in it, which ought to be in wine: The same is to be judged concerning my* Alkaheſt: *To wit, that if the virtues be agreeable to the name, from whatsoever* Subject *it be extracted, it rightly meriteth the same name, which that it may the better be understood, I mean by the name of* Alkaheſt, *a very hot, fiery, dry, and also humid water void of all corrosive power, by which* Vegetables, Animals, *and* Minerals, *are dissolved without noise, yet not all in the same manner, and elaborated into Salutiferous medicines, as I have shewed in the* first part of my Mineral work. *And because I have written such things of it, many have endeavoured to prepare such a Menstruum, every one from his own Subject; Impostors also have offered to others, a water plainly corrosive instead of it, fasly pretending that they had obtained the secret from me, and that it is the same which I have described in my* Mineral work; *then one sells that putatious* Universal solvent *to a another at a dear rate, whose nativity and preparation lies hid with the seller, that so the blind leading the blind both may fall into the ditch; which thing, when I knew it, I was constrained whether I would or no, to lay open to the Reader, what is properly the nature of my* Alkaheſt, *and what are its virtues and powers, so that those who erre, may have a rule by which they may be able to judge of any other pretended* Alkaheſt, *whether it be mine or not.*

Therefore this incomparable subject is called an universal solvent, because by its benefit, many incredible things are performed in the preparation of good Medicines, and also in the preparation of metals, yet let no man believe that it dissolveth metals swiftly and violently, like aqua fortis, aqua regia, *or other corrosive waters, not in the least, but worketh altogether after another manner,* viz. Vegetables *and* Animals *are dissolved in digestion, by the moist way, in which solution, the pure parts are separated from the impure.*

And Minerals and Metals also being dissolved in the moist way by its benefit, may be washed, purged and maturated, and reduced either into good medicines, or into better metals, but not with the same advantage and celerity as in the dry way, by which very many incredible mutations are presently performed, to be admired by the inexpert, too tedious here to be treated off. Besides those two ways of dissolving, which (that I might demonstrate the possibility of the matter) I have shewed to some; there yet occurrs another far different from those, by which metals and other Subjects are swiftly, meliorated to the eye, and are maturated, depurated, and transmuted into the best of medicines, and into purer bodies: the reasons of which, solution there is no need to expose to every one, chiefly, because that labour requireth a skilful Chymist and there are few who heartily search into the secrets of nature, but most Chymists vexing themselves with vain processes, understand nothing solid in Medicine or in Chymistry, which imaginary Artists, when they happen upon true writings, cannot reach their sence with their dull brains; they speak evil of the Author, disdaining his industry and unwearied labour, in communicating his talent; whence it comes to pass that he which brings forth any thing of good, finding nothing but ingratitude, chuseth rather to carry his talent with him to the grave, than to publish it to his own damage. And this is the only cause, why I have not plainly prosecuted the use of this Menstruum in the preparing of medicines, and meliorating of metals, but have only pointed at what may be effected by the help of it, that it may be made manifest, what is to be judged concerning it, and whether that which is sold for such by others, be like to that described in my Mineral work *or not: I doubt not but many will quickly despond, thinking that their* Alkaheſt *will in no wise perform those things which I here ascribe to my Menstruum, and will also believe the matter not to be so easy, as before they thought it to be, but although it arise from a vile subject, that nevertheless its invention and use is very difficult. For whosoever hath such a menstruum, by which these following things may be effected, he may indeed rejoice in the possession of the* universal solvent *or* Mercury *of* Philosophers, *having a door opened to true medicine and Alchymy. Therefore for the sake of Searchers, I will begin to shew somewhat of its virtues and powers, as far as I may, that the* Magnalia *of* God *may thence be made manifest, and that I may give occasion to every man, to render praise, and thanks to his Creatour, who is the giver of all good.*

Of

Of the Tranſcendent Virtue, Power, Nature, and Property of this Wonderful

Univerſal Menſtruum.

IT is worth our noting, that three Operations eſpecially may be performed by the benefit of this *Menſtruum*.

I. It maturateth all Vegetables and Animals, being diſſolved into a Liquor, and taking away their Venom, converteth them into ſalutary Medicines.

II. It diſſolveth Minerals and Metals, as well by the moiſt as by the dry way, correcteth their venoms, ripeneth and fixeth their crudity, ſo that they may be made good Medicines; and after fixation, yield good and genuine Gold and Silver.

III. Thoſe Metals, Minerals, Stones, and other compact Subjects, not diſſolvable by the aforeſaid waies, it diſſolveth, maturateth, purifieth, and in an hours ſpace exalts Metals, more than the two former Solutions can do in a whole day, whoſe change into better may be obſerved in every hour: It diſſolveth Metals and Minerals into a penetrating ſpirituality, ſo that the Metal is not ſeparated from the *Menſtruum*, but a ſolution is made of both, either by the dry or moiſt way, from which the more pure part of the Metal, or that which is Gold or Silver, after the premiſed fixation, is precipitated by Art, eſpecially if many were jointly diſſolved. Whence it is ſufficiently manifeſt, that in all the Imperfect Metals Gold and Silver is notably abſconded, not diſcoverable by the vulgar Examen of Cupels: which Operation being performed by a *Menſtruum*, prepared in ſo groſs a manner, it is credible, that if this volatile Hermaphrodite and ſpiritual Mercury were again fixed, and rendered Corporeal, that it would be by many degrees more ſubtile, penetrant, and efficacious, for the diſſolving, altering, and perfecting of Bodies, than it was before.

This is its Uſe in general; but ſpecially it abundantly exerts its manifold Virtue; before whoſe deſcription, it ſeems not amiſs to point out the common Name of this ſubject, and what the common People think of it. Which, that I may expedite in few words, know, that it is nothing elſe but the naked ſalt of the Earth, of which *Salt-Peter* is made. But that every ſalt of the Earth, or common *Salt-Peter*, hath thoſe Virtues which I here aſſign to my ſubject, I ſhall in no wiſe ſay, ſeeing that it ought to be diverſly prepared for divers uſes, according to which, thou maiſt expect divers Virtues.

This ſubject is neceſſary to be known by all the Inhabitants of the whole Earth, to all orders and degrees of men, becauſe not to man only, but alſo to every Creature, it is profitable or noxious, according to its various application.

This ſubject ſerveth for *Phyſicians*, *Chirurgions*, and *Apothecaries*, of which they may prepare excellent Medicines againſt the natural Diſeaſes of Men. Whence the truth of that common ſaying of Philoſophers is undoubtedly aſſerted, *viz. That of the greateſt Venom the greateſt Medicine againſt Diſeaſes is to be prepared.* And that Nitre is the worſt of Venoms, I have evinc'd in the ſecond part of my Furnaces, where I preferr it to the *Baſilisk* himſelf; and that from the ſame Nitre, and its mediation, is to be prepared a moſt excellent Medicine. In the Firſt Part of my Mineral Work, for the ſake of Phyſicians, Chirurgions, and others, applying themſelves to Phyſick, I have ſhewed how by the help of my Alkaheſt, Medicines are to be prepared from Vegetables, Animals, and Minerals, far exceeding the ordinary waies of Preparation.

But it is not my mind at preſent to diſcourſe much of Medicines, it may ſuffice to have ſhewed what Virtues this Univerſal ſubject hath, and to what uſes it may be appointed. I ſay, that it may be profitable to all orders of men, as well to the ſuperiour, as to the inferiour, to ſpiritual and ſecular, noble and ignoble, rich and poor: of which orders the Phyſician is not to be deemed the loweſt.

That I may perform my promiſe, what unheard of things may be done, by the benefit of this ſubject, in natural diſeaſes incident to man, who is obnoxious to all kind of miſeries, I will in the next place reveal ſomewhat for his health and comfort.

But this my Medicine, which I deliver, is not of great price, but of great Virtue, and of which the poor as well as rich, may be partakers, and (by the bleſſing of God) may be freed from every curable diſeaſe.

The Preparation.

TAke two or three pounds of this Menſtruum, *whoſe corroſive nature tranſmute by force of fire into a nature not corroſive; and you have the* Menſtruum *prepared, with which you ſhall elaborate this Medicine, in this manner: Diſſolve in this* Menſtruum *as much of the firſt Ens of Gold (which is to be found in all places of the World, but eſpecially in golden Mines more copiouſly) as it will attract in the heat; ſo that a red Solution may be made, which digeſt for ſome daies, with its own weight of the diſſolving Wine; make ſeparation of the pure parts from the impure, by removing the faces which ſever themſelves from the Medicine, by falling to the bottom, this being concentrated by an eaſie heat, will be a red pellucid ſtone, very like to a ſoluble ſalt, which is to be carefully preſerved. This Medicine will be ſecond to none, except the ſtone of Philoſophers, and will be of the ſame goodneſs, after a Hundred Years, that it was the firſt day it was made, performing all things which I ſhew with amazement, for which no mortal man can ever render ſufficient Thanks to God.*

The Uſe of this Medicine in general.

THis Univerſal Medicine will cure every natural diſeaſe both in young and old, ſtrong and weak, in a very ſmall doſe, without any danger, not nauſeating the ſtomach, as the uſual Potions do; and is to be taken in any Liquor, according to the Condition of the Sick, as warm Broth or Gruel, Wine,

Beer or Ale, Water, Milk, &c. from one grain to eight grains, which is the higheſt doſe. It operateth after a diverſe manner, according as the ſtrength of the ſick, or the nature of the diſeaſe requires: If you continue in the Uſe of the preſcribed Doſes, the operation will be inſenſible; it ſtrengtheneth and mundifieth the radical moiſture, and in a wonderful manner expelleth every Evil out of the Body being taken daily, every other or every third day: It preſerveth from accidental Diſeaſes, correcteth Venom, and reſiſteth infectious Airs. But if the Doſe were greater, the Operation will be more evident, by Sweat, Urine, Spitting, and ſometimes by Stool, according as you pleaſe, by encreaſing or leſſening the Doſe; and if the diſpoſition of the Diſeaſe comply, it is cured by a ſmall quantity of this Medicine, without ocular obſervation; but being radicated, requireth a manifeſt operation, if it refuſe to yield to a ſmall Doſe acting inviſibly; becauſe both in preparing and uſing this Medicine, regard is to be had, that you neither err in exceſs or defect, but by obſerving a *Medium*, you ſhall obtain both Profit and Honour.

Thoſe of ripe years may take from one to ſix grains every day, if they have leiſure to attend the Cure, but if not, three grains every fourth day, until there remain no foot-ſteps of the Diſeaſe: taking nothing beſides this Medicine, and keeping that day from the cold Air, and abſtaining three or four hours from Food. In the *Leproſie* and foul Scab, there is no Remedy ſafer than this Medicine, extirpating the Roots of the Evil without trouble. Nor will you ever be fruſtrated in the deſired effect, if the Sick have ſtrength ſufficient to undergo the Cure. [See its Preparation and Uſe more particularly deſcribed, in Part 2. *Phar. Spagyr.*]

After the Deſcription and Uſe of this Medicine, by which the health of Man may be preſerved, and being loſt, may be reſtored, which is far to be preferred to all the Treaſures of the whole World. There now follow other Secrets, ſhewing how by the help of this ſubject a man may acquire an honeſt Living; and, as I have ſaid in the Preface, this ſubject may be profitable to all orders of men in the World, whether ſuperiour or inferiour, Eccleſiaſtical or Political, noble or ignoble, rich or poor, by conferring or admoniſhing ſomewhat of good to every one in his Profeſſion. Therefore I will now begin to teach ſome ſignal uſes of it, that it may be manifeſt to all men, that this is an Univerſal ſubject, which I have alwaies judged ſuch, and that others with me may find it ſo.

In the firſt place, all Foſſiles or Minerals digged out of the Earth, may be perfectly examined by the mediation of this ſubject, what metals they contain, how many, and how much of each: It is an infallible Guide to the diggers and melters of Ores, ſaving them both loſs of time and matter. An excellent Artifice, by which the value of all Minerals may be diſcovered without much labour and charge, being highly neceſſary for Metallurgiſts, of *Germany* eſpecially, being quite undone by a continual War, who may in a ſhort time lay up great Stocks or Treaſures, to be imployed againſt the Enemies of their Country in time of neceſſity: by whoſe benefit alſo rich Mines of gold and ſilver (which otherwiſe would for ever lie neglected) may be diſcovered, when they are ſwiftly and accurately examined.

The Marcaſites of Gold and ſilver being melted by the mediation of this, by a ſingular compendium, hitherto unknown, do afford more metal than by the common way.

The volatile and immature Marcaſites of gold and ſilver, are fixed in the ſpace of three hours, ſo that they yield more metal than they could have done without fixation.

Thoſe three things are very neceſſary and profitable to every Magiſtrate having Mines in his juriſdiction, by which he may obtain much wealth.

All Gold and Silver which is not purely melted from its Marcaſite, is ſwiftly purged from all additament, the Silver is ſeparated from the Gold, by fuſion only, with ſmall labour and coſt, but in great weight. Gold and Silver are eaſily drawn out of old Tin veſſels, the tin being preſerved almoſt in the ſame weight, and being made better than it was before, may ſerve for the ſame uſes to which it is wont to be put.

From *Biſmuth* much ſilver is ſeparated, the *Biſmuth* being preſerved, this ſecret being agreeable to thoſe places which abound with that Mineral.

From old Copper much Silver may be ſeparated, the Copper remaining unhurt, by which Artifice Countries abounding with this metal, may not a little profit themſelves.

Every common ſilver, may in the ſpace of a few hours be exalted into the nature of Gold, the which if it be done four or five times, which may be in a ſhort ſpace of time, it giveth ſo much gold, as affordeth a ſufficient livelihood, over and above the coſts.

Gold may be ſeparated by fuſion, from every addition of Copper, Tin, Iron, Lead, Orpiment, Antimony Arſenick or the like, and be purifyed without Cupels, each being kept apart; profitable for Metallurgiſts and the like, from the ſhortneſs of the time, ſmallneſs of the charge and labour, and much gain,

Every imperfect metal without the mixture of other metals, may be ripened by this ſecret alone in the fire, in the ſpace of an hour, ſo that it will yield Gold and Silver, but without gain.

There is another very gainful augmentation or increaſe of the perfect metals, by the imperfect, anſwering to the Germination or growth of vegetables; for even as every ſeed being caſt into the earth, groweth therein ariſing to be an herb or a tree, and taketh alſo its encreaſe from the ſame by its inbred attractive power; ſo is it here alſo, for *Sol* or *Luna* groweth and encreaſeth in *Saturn*, *Jupiter*, *Venus*, or *Mars*, as in their native ſoil, and are nouriſhed after the manner of herbs, and encreaſe from day to day. An Art not to be deſpiſed by Philoſophers.

By the mediation of this, from all imperfect metals and minerals, yielding nothing by the uſual examen of Cupels, Gold and ſilver is produced in a manifold manner, being an argument that the imperfect metals have ſomewhat of the perfect reconded in them, when they are inverted and ſhew themſelves to our ſight, a work not ingrateful to thoſe who work in Metals.

Theſe are the chief things which I have found may be done in metallick works, by the help of this Subject; yet I make no doubt but there are many more unknown to me, to be revealed to others after me who ſhall make a good beginning from my writings, the which I alſo wiſh from my heart, that the hidden myſteries of the natural wonders of God, may at length be brought to light, for the uſe of mankind.

Among the enumerated Arcanums, ſome perhaps may ſeem of little worth to the Reader; but there

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are ſome from which may be had a commodious livelihood, ſo that an Artiſt need not be at the will of another, without he pleaſe. O how great a thing is Liberty, which no man can worthily eſteem, who hath not been a Servant himſelf. A piece of Bread is ſweeter to a quiet, prudent man than many dainties, with care, danger, and noiſe. It is happy for him who can ſay with *Paracelſus*, *Alterius non ſit, qui ſuus eſſe poteſt*; *Let him not be anothers, who may be his own.* But it is good for him that would uſe well the Gifts of God, not to be unmindful of his Neighbour, leſt temporary Liberty caſt him head-long into the Dungeon of eternal Slavery. After ſhewing this ſubject to be conducible to all the Inhabitants of the earth, I have deſcribed its uſe in Metallicks, which is not to be indifferently undertaken by every man, but by thoſe only who are concerned in digging of Mines, and melting and ſeparating of Metals, whether they be noble or ignoble, learned (as well ſpiritual as ſecular, exempted from publick offices) or rude, which maintain themſelves from Merchandice, or live upon their Eſtates, all which may receive Fruit from theſe Secrets, but not Husbandmen, Labourers, Ditchers, *&c.* but that to theſe alſo ſomewhat of profit may proceed from my inventions, I will ſhew in order; although the principal will redound to ingenious Artificers, Engravers, Painters, Statuaries, thoſe who adorn Glaſs or Clothes with Silk, Gold, or Silver, and they who make Wax-work.

They who etch upon Copper, may prepare from this ſubject a good corroſive water, by which (the Copper-plates being firſt ſmeared over with a covering fit to defend them, and what Images and lines they pleaſe, being drawn upon them with a ſtile or ſtift) by a very eaſie and compendious manner, they will be eroded or eaten into.

Painters, by the help of this, may prepare for themſelves moſt excellent Colours, as *Ultra-Marine*, *Smalt*, fine red or ſcarlet *Lacca*, *Venice-Ceruſe*, and others neceſſary for their Uſes, which otherwiſe they muſt have from far, as *Italy*, *Holland*, *France*, *&c.* and at a dear rate.

Engravers and *Statuaries* may ſo harden their Tools that they may hold their points long, if they be to cut ſtones.

Embroiderers may put any durable Colour they pleaſe upon the ſilk with which they work.

They who paint Glaſs, by an eaſie work, may thence prepare all Colours or Enamels for Glaſs, ſo that there will be no need to have them from *Venice*.

They who work in Wax, by the benefit of this, may whiten it exceedingly, and colour it as they pleaſe.

Printers may add this ſubject to their Ink, which will cauſe it to adhere moſt firmly to the Paper, and render the Letters very fair.

It is convenient for *Clockmakers* or *Watchmakers*, if a Water be deſtilled from it, which ſoldereth Iron or Steel without Fire, if a drop of that *Aqua fortis* be dropped upon it, whence the Iron growing hot, it preſently waxeth ſoft, as if it had been ſoldered in the fire by the help of Copper.

All *Smiths* may by it harden their Files, and other Iron Tools, as hard as if they had been made of the hardeſt Steel.

Tin-workers or *Pewterers*, may harden their Tin or Pewter, and give to it an elegant whiteneſs, ſo that it will reſemble Silver both in colour and ſound; neither will it eaſily tarniſh, and by reaſon of its hardneſs will endure longer than common Tin or Pewter.

Cabinet-makers may ſtrike an excellent Black upon Pear-tree, Cherry-tree, Box, Walnut-tree, and other hard Woods, which may be uſed for curious Works inſtead of Ebony.

Skinners or *Furriers* may dye their Ermins, Fox-skins, Wolf-skins, and the like Furrs, with a Scarlet, Crimſon, or deep Black colour, far exceeding the natural.

In like manner, *Feather-dyers* may ſwiftly give any laſting colour to their Plumes.

Taylors may take out ſpots or ſtains out of Woollen, Linen, or Silk Garments, and reſtore their beauty.

If *Shoomakers* put old Iron to this ſubject, they may therewith adorn their Leather with an excellent Black.

Weavers may render their Linen threads ſo fine and ſoft, that they ſhall emulate Silk.

Dyers, by this, may give ſo firm and unchangeable a ground to their Cloth, that the ſuperinduced Colours ſhall not be corrupted or ſpoiled by any Wine, Vinegar, Urine, Pickles, Air, or Sun.

Potters may thence prepare a Glaſſy colour, not unlike to the *Indian Porcellane*, of which Veſſels may be made, having the Aſpect of Gold, Silver, or Copper, a ſingular Ornament for Noblemens Tables, hitherto unknown to the World.

Souldiers, *Merchants*, *Travellers*, *Carriers*, and others who are much in the open Air, may of this prepare a Varniſh, in which they may dip a Linen Cloth, which will not permit either Air or Water to paſs through it, with which they may defend their Boots or Clothes, ſo that they may travel dry in the Rain.

They who make Tapeſtry, may reſtore their faint or faded colours, ſo that they ſhall be ſtrong and beautiful.

Miſtriſſes of Families may prepare of it fine Soap or Waſhballs, far exceeding that of *Venice*.

Houſhold-Maids may with it ſcowre or cleanſe their metallick veſſels, ſo as to render them neat and beautiful.

Women may change the yellow, pale, or brown colour of their face and hands into a beautiful whiteneſs.

Old Women may by an eaſie way take away the wrinkles of their face and hands; as alſo, the Corns of their feet, and boil their Linen to ſuch a ſoftneſs, that it ſhall come but little ſhort of Silk.

Gardeners by this ſubject may deſtroy all Inſects, by mixing it with Water, and pouring it into thoſe places where they breed, for they will either die in their holes, or run out to die, becauſe they are not able to abide that fire. It alſo ripeneth Fruits, if a little of this *Menſtruum* be applied to the roots, at the entrance of the Spring; and if a large quantity of Apples be covered well over with it, they may thence prepare a laſting Wine, Vinegar, or burning Spirit.

Bakers may uſe it inſtead of Ferment or Yeaſt, if they diſſolve a few Hops therein.

Brewers may have very ſtrong Ale or Beer by its help, if they extract their Hops with it.

Mead or Metheglin, as alſo Beer and Canary, which are upon the turn, and growing ſowre, may by this be rendered drinkable.

Comb-makers, and other Horn-workers, may by this ſoften their Horns, ſo that they may imprint upon them what Images they pleaſe.

Keepers of Armories may preſerve their poliſhed Arms or Harneſs ſafe from Ruſt, by anointing it over with this ſubject.

Bird-Catchers may by help of this prepare ſuch a Birdlime as will not be hurt either by Cold or Heat.

Souldiers by means of this may prepare from Gold a fulminating Powder, of which the magnitude of a Peaſe being put upon a red-hot Iron plate will give a greater clap, than half a pound, yea, a whole pound of Gun-powder; the ſame may alſo be prepared without Gold, only by the addition of Salt of Tartar and Sulphur; as it is deſcribed in the ſecond Part of our Furnaces.

Engineers and *Makers of Fire-works*, may perform many wonderful things by help of this ſubject.

There may alſo many new Works, belonging to Weaving and the Smith's Art, be thence made, which may be communicated to neighbouring Countries, whereby Money may be brought in lieu thereof to a Countrey impoveriſh'd by War.

If *Vine-dreſſers*, or *Keepers of Vineyards*, pour a little of this ſubject to the Roots of their Vines, they will have ripe Grapes, and *Muſt*, or new Wine ſooner than their Neighbours; of which they may make a good advantage.

Nevertheleſs, Muſt and Wine alſo may be ripened after another manner, in the Hogſhead, without this Art; ſo that they who underſtand the way, may have alwaies good Wine, when others have it ſowre: A Secret very profitable to cold Climates, which for the moſt part produce ſowre or tart Wines. It is alſo agreeable to Countries abounding with Wine, when through a want of the heat of the Sun the Grapes do not ripen well; which may be helped by this Art, ſo that it may be readily ſold.

But becauſe the greater part of men, eſpecially of the meaner ſort, cannot be perſwaded to things which they have never ſeen nor heard of, I well know, that if I ſhould in plain words deſcribe the reaſon and manner of meliorating Wines, ſcarce one man in a Hundred would believe me, but would rather ſay, Our fore-Fathers were wiſe men, and got great Eſtates by Wine, without the knowledge of this Art, nor did they deſire it. If Nature will not ripen our Wines, let them be ſowre; yet notwithſtanding, if ſometimes they will not ſerve the Maſter, they may be drank by the Servants.

Men of this ſort are incurable, neither are they (being old) eaſily tamed; and young men take little care how prudently they manage their Affairs. Hence it comes to paſs, that Antiquity obtains upon all men. But that the Vine-dreſſer may ſee that the preſent Age is more skilful than the former, I will ſet before him only one demonſtrative Example, by which he may plainly ſee how much they differ.

Our fore-Fathers knew not how to make any thing of the fæces or dreggs of Wine, but a burning Spirit or Brandy, which being extracted, the remainder they threw away, or ſometimes mixed it with the Fodder of Cattel, very rarely dried them in the Sun, and burnt them into Pot-aſhes; but by my invention, there may be thence drawn a far greater quantity of burning Spirit, then alſo a large quantity of Tartar, and at laſt the Pot-aſhes, which is a threefold profit. Which if you manage the matter well, from a Pipe of Lees, you will have at the leaſt ſeven or eight Urns (*which will be about a Fifth part, an Urn being four Gallons*) of good Wine, from the reſidue, you will have the burning Spirit, and Tartar, at the laſt the clavellated Aſhes, the profit being four times as much as heretofore, which thing was altogether unknown to our Anceſtors. How many Thouſand weight of Tartar is every year thrown away in *Franconia*, *Suevia*, *Alſatia*, the *Palatinate*, upon the *Rhine*, *Moſell*, and *Danube*, which would be very profitable to thoſe Countries, if the men were Artiſts.

But what doth it ſignifie to teach, if there be none to hear or learn: for it is more adviſeable to ſit ſtill and do nothing, than to be largely imployed to no purpoſe. But I am perſwaded, that after my death, there will be ſome who will underſtand my good will to the World, and ſearch out the truth out of my Writings, to their own great profit. There is an opportunity or ſeaſon for every thing; Trees firſt bring forth Budds, then follow Bloſſoms and Leaves, and laſt of all, Fruit.

There remains yet another thing very profitable to Country-men; the juice of Apples or Pears being preſſed out, by the help of this ſubject, ſuch an Efferveſcency (or working) is promoted, as Wines may be thence made, having the reliſh of the natural, and but little inferiour in durability and ſtrength: and although the beating of the Apples be ſomewhat tedious, (which is now done much quicker by Mills) that labour is recompenſed with a good profit, by the Wine ariſing from the juice; a Secret very neceſſary for cold Countries, which cannot ripen Wines, and yet abound much in Apples, but by this way may ſave much in the price of Wines, for which they uſually pay dear.

I have indeed many Arts relating to Wines, but they belong not to this place, my purpoſe here being to treat of thoſe only, which are adminiſtred by my *Univerſal Menſtruum*: Arts (as I think) hitherto known to none, or at leaſt not divulged, that it may be manifeſt to the Reader what proficiency the World hath made in good things. Whether the matter be credited, or not, ſignifies little to me, I my ſelf alſo might have doubted, if I had not learned by experience; but Judgment ought not to be given raſhly; we are to know, that God doth wonderfully diſpenſe his benefits to thoſe who are his Servants, and whom he hath appointed to be his Inſtruments, to bring his wonders to light.

If Husbandmen moiſten their ſeed with this *Menſtruum*, it will ſooner be ripe, and have larger, fatter grains than ordinary: Which being done, I will ſhew by what means they may make great profit of their grain. The grain being whole, not ground, pour to it warm water, impregnated with this *Menſtruum*, in a Hogſhead well ſtopped, let it ſtand and ferment or work for a time, the water will extract all the ſtrength of the grain, the remaining husks ſerving to feed Hogs: If you ferment Hops with this Liquor, or extract, it will be good Beer: If you will not do this, you may thence draw a very good ſpirit, the reſidue, in a ſhort time, will be Vinegar; and if you be wiſe, you may put this burning Spirit or Wine to many uſes, by which you ſhall have more profit than by ſelling it; a Secret not to be deſpiſed where grain is cheap. I have yet one thing to add among my Wine-Arts, concerning grain, and the Fruits of Trees and Shrubs, which is to be received with thankfulneſs, as a great Gift of God to Mankind. *Viz.* It is found by induſtry and manifold experience, that from Rye, Wheat, Oats, Rice, Millet, alſo from Apples, Pears, Peaches, Cherries, Plumbs, Sloes, Damaſcens,

maſcens, Quinces, Figgs; as alſo from Gooſe-berries, Mulberries, Barberries, Black-berries, Elder-berries, and other-like Fruits of Trees and Shrubs; from all theſe, I ſay, may be prepared, with little labour and coſt, a Drink very like to Wine, both in taſte, ſmell, and ſtrength, being grateful, wholeſome, and durable. For which large bounty, the Inhabitants of cold Climates (which never ſee Grapes) cannot render to God ſufficient Thanks.

There yet remains a manifold uſe of this ſubject in Medicine, which if it were rightly deſcribed, would make a great Volume, which belongs not to this place, but ſhall be done more commodiouſly at another time in a peculiar Treatiſe. It were to be wiſhed, that this ſubject were better known, and more uſed by ingenious Chymiſts and Apothecaries, that ſo many dead Herbs and unprofitable Waters might not be ſet to ſale. What, I pray, would it avail, if the whole Maſs of Blood being inflamed with an intolerable heat (as happeneth in the Plague and other contagious Fevers) you ſhould wrap the head with a moiſtened Roſe-Cake, comfort the Temples, Pulſes, Hands and Feet with Water? think you by this to drive away the Diſeaſe? Not at all, but rather render it worſe, as Experience hath often witneſſed. But it ſeems to me as if a vaporary Bath or Cauldron were too hot, and one ſhould go and cover the Furnace all over with cold linen, to temper the heat, a thing to be laughed at; but the wood which cauſeth the flame being taken out, the Furnace cools of its own accord. By a like reaſon, the malignant Fire of hot Diſeaſes is in the ſpace of a few hours, drawn out from the moſt inward Penetrals of the Heart, by four grains (at the moſt) of a good Medicine, where no place is left for external Coolers, or corroborating Epithems. Which thing I have obſerved not only in one, but in many Experiments; That the Venom being excluded from the Heart, the Body hath returned to its due temper, and by degrees to health and ſtrength.

To what purpoſe are ſo many Ointments, Oils, Emplaſters, *&c.* when a ſmall quantity of a good Medicine is able to effect more than them all? A whole year is often ſpent in the curing a ſmall Ulcer or Wound, and then left worſe than at the beginning, the Bridle (according to the Proverb) being applied to the Horſes Tail, and not to the original of the Diſeaſe. The Fountains of external Ulcers are to be dried within, and not imprudently to be ſtopped up with outward Plaſters, which otherwiſe, without any outward Remedy, by a ſmall quantity of a good Medicine, may be radically cured in the ſpace of a few weeks. Therefore ſuch a Medicine is to be ſought, and all other trifles to be laid aſide: But what doſt thou, ſeeing the World will be deceived, and deſireth no other? For if any Phyſician have a good Medicine, which is much eaſier for the ſick to take, than many ingrateful Potions; this is neither eſteemed nor rewarded, for if he require a Fee or Reward, he is anſwered, That he gave only a few grains of powder, two or three times, which cannot be ſo dear: Hence chuſing a certain thing for an uncertain, he requireth his reward according to his viſits, and preſcribeth Bottles full of Phyſick, which may be long in taking, and he have the fitter opportunity to encreaſe their number.

The ſame thing hath alſo obtained in Chirurgery, for if an honeſt Chirurgeon quickly cureth an outward Evil by the help of a good Medicine, he ſhall not have a due reward, but ſhall be told, That he hath only applied two or three Plaſters, which can be worth but little. Therefore inſtead of being paid for a quick Cure, he reaps nothing but ingratitude; ſo that being better taught, it behoveth him to do like others, by employing a month or more about that Cure, which he could perform in three daies.

For this, and the like cauſes, very few are treated with good Medicines, but Phyſicians ſtudy delaies, after the old manner, if not in reſpect of the ſick, yet at leaſt for their own profit; for if the ſick readily pays his Fees, he, either out of ignorance or voluntary neglect, neglecteth the matter, for which he will have an heavy account to give.

The preſent World doth only this, he that ſtandeth, let him ſtand, and he that falleth, let him lie, none regardeth it; every one taketh care of his own matters; nor will he put his hand to the quenching of the fire. That famous Patron of Art, *Alexander* the Great, who beſtowed upon his Philoſopher *Ariſtotle* more than a Hundred Thouſand Crowns a year, for his Inquiries into Vegetables, Animals, and Minerals, now ceaſeth to be. The moſt wiſe *Erneſtus* Duke of *Bavaria*, and Elector of *Cologne*, What Expence hath he not been at in collecting the Writings of that incomparable *German* Phyſician and Philoſopher, *Paracelſus*, and other ſuch Cheriſhers and Advancers of Arts, our *Germany* hath lately brought forth? but *Mars* (the Sword) aſſerting his Empire, hath baniſhed *Jupiter* and *Mercury* (Juſtice and Arts) ſo that they play leaſt in ſight; but ſure it is, that if they be not quickly reſtored and advanced to their dignity, it will be to the unſpeakable detriment of the Country, and to the great advantage of Strangers; *Which God of His Mercy prevent.*

And now the benevolent Reader hath ſeen, what wonderful and incredible things may be performed by the benefit of this ſubject; yet I will not deny, but that it may alſo ſerve for many more things which I know not, being profitable for all orders of men, ſuperiour and inferiour, learned and illiterate, great and ſmall, according to their ſeveral Vocations and States. But ſome men may ſay, I do indeed believe that many great things may be done by its means; but becauſe thou doſt not together and at once ſhew the way of preparing the Univerſal Medicine or Tincture by its help; there is therefore reaſon to doubt whether it be the *Univerſal Secret Menſtruum* of the ancient Philoſophers, to wit, the *Hermaphrodite Mercury*, ſo much ſpoken of by them, every where to be found, a thing contemptible and vile, to be found in every Dunghil, by nature cold and hot, a great Poiſon, quickly killing and quickly healing, a matter to be found with all men, which the rich and poor equally poſſeſs, which *Adam* brought with him out of *Paradiſe*, and many more Epithets of the Ancients, which are all agreeable to that thing. To this I anſwer, That in my judgment the Ancients had no other Univerſal Mercury, to which all their marks do perfectly agree, and may be applied. Do not all men know it, ſeeing and beholding their own Urine, of which it is generated? Is it not a very vile matter, which we keep not in the Houſe, but throw out of doors, according to the Precept of the Philoſophers, to be ſought in Dung? Is it not a great Poyſon when made into Gun-powder or *Aqua fortis?* and, Have not I ſhewn that a Uni-

verſal Medicine may be made of it? Is it not a meer Fire, and alſo being pure, cold as Ice? and if you will, hath it not equally maſculine and feminine gifts? Doth it not ſo impregnate the imperfect Bodies in the ſpace of a quarter of an hour, that they generate Gold? Is not it ſelf impregnated by the heat of the Fire, that it bringeth forth thoſe Fruits? Is it not highly volatile, and preſently firmly fixed? Is it not a Water both moiſt and dry? a great Corroſive, and yet being rightly prepared, an Enemy to Corroſives? Is it not moſt heavy and moſt light? To what thing, except Nitre, doth this Enigma of the Philoſophers agree? For, What is blacker than a Crow, whiter than a Swan, more hurtful than a Serpent deſtroying many, lighter than the Wind, heavier than Gold? Is not this the true devourer of his own Children (the Metals) the *Azoth* of Philoſophers, the Soap of the Wiſe, the Urine of Boys, Sulphur vive, the Salt of Strangers, the Secret Fire of Philoſophers?

Are not all theſe things in Nitre? But by what method they may be there found, is not my buſineſs to ſhew in this place, let it be ſufficient to have pointed out the ſubject in which they are to be ſought and found, which no man before me hath been ſo kind to do. For further demonſtration, to wit, that from Nitre a true *Univerſal Solvent* (I would not have you imagine it to be *Aqua fortis*) may be prepared, there needeth not. But thou maiſt contradict it if thou canſt, or name another ſubject in which are all thoſe things. Which I know thou canſt not do, if thou could'ſt at once take a view of the whole World.

That I have not written any thing concerning a Tincture to be prepared of it for the Imperfect Metals, (which defect the ancient Philoſophers have ſupplied) thou maiſt think that I have not proceeded ſo far, and that I have wanted time and opportunity to make a farther Progreſs, nor did I ever aſpire to ſo great things, but have contented my ſelf with thoſe of a meaner Rank. But how far I have penetrated by ſearching into Nitre, may be ſeen in the Second Part of my Furnaces, where I have preſcribed ſome notable Proceſſes from a groſs ſubject, of which this is not the leaſt, where I ſhew, that ſome years before, I would have melted a Calx of Gold, and becauſe it would not melt, I added by intervals a Fluxing Powder, prepared of Salts, till all flowed well, then the Crucible being taken out of the Fire, and the matter poured out, when I expected Gold, inſtead of that I found Lead, but the Fluxing Powder was very red, (although made of the whiteſt Salts) being tinged with the *Anima* of Gold, the Gold being diveſted of all its dignity. Which thing, when I had conſidered, believing ſome Secret to lie in the matter, I ſeveral times repeated the labour, but alwaies in vain: the cauſe of which errour was not the ſubject, but my ſelf, who had not obſerved the weights and degree of Fire; or God, who would not that I ſhould make any farther diſcovery. Truly, if that Labour had ſucceeded, I ſhould long ſince have poſſeſſed the Stone of Philoſophers, who am now forced to ſuſtain my Family by meaner things with labour. But paſſing by this, ſee, I pray you, what the moſt accurate *Philippus Paracelſus* aſcribeth to rude Nitre, when he ſaith, *Chymiſtry hath diſcovered the matter to lie in Nitre.* Let *Baſil Valentine*, *Sendivogius*, and the ancient Philoſophers, be conſidered, and you ſhall ſee that all their Sayings are accomodated to the operation of this ſubject, and that I have not attributed too much to it, but rather leſs than is due. I could, had I a mind ſo to do, compoſe all the terms of Philoſophers with this ſubject, but to what purpoſe ſo great a prolixity? He that ſhall once come ſo far as I am, the Secrets of the Philoſophers will be ſufficiently manifeſt to him, and will freely confeſs, that this is the only true *Univerſal Solvent*, and that there is no other. Many have alwaies believed this thing to be prepared of Nitre, but becauſe they were not fully confirmed in their minds, they tried nothing with it, and therefore found nothing. Many men in my time have endeavour'd to fix Nitre into a Tincture, but becauſe they took it crude without a due Preparation and fit Aſſociate, ſuch as it was when they committed it to the Fire, ſuch it remained; but if they had known how to have joined an amicable ſubject with it, perhaps it might have been more profitable. *Baſilius* commandeth to aſſociate it with a brisk and lively female, from whoſe embraces the Queen might bring forth iſſue: All the Philoſophers ſay, that to *Mercury* is to be added its own weight of Gold and Silver, (but not the common) and that of both is to be made one indiſſolvable thing; for while the Gold is diſſolved by the Mercury, in the ſame moment the Mercury is coagulated by the Gold, the ſolution of the Body, and the coagulation of the Mercury, are done both by the ſame Work. Certain it is, that there is one thing among Minerals, which is conjoined and fixed with our Nitre, and during the fixation, paſſeth all colours; but I know not the end of the thing, having never performed that labour, and by reaſon of my great age, think not to repeat it; nor will I be the adviſer of any man, that he ſhould ſearch after an uncertain labour with a certain Loſs: but if any man in doing this ſhall miſs his hope, let him not blame me for giving him the occaſion by this Writing, who have wrote this only for this end, that I might make it manifeſt, that the name of *Univerſal* is not undeſervedly aſſign'd to it: Neither alſo is there any need, that a thing of ſo great moment ſhould be made known to an ungrateful World. Any of thoſe things which I have ſhewn may be done by it, are ſufficient for a man to ſuſtain his Family.

Some man may except, and ask, Who hath revealed to thee, that this is the *Mercury of Philoſophers?* I anſwer, That I know it to be ſuch from the properties, form, and nature aſſigned to it by the Philoſophers, which thou alſo, if thou hadſt Philoſophick eyes, wouldſt acknowledge to be ſuch, which is wont to hide it ſelf from the proud, and to reveal it ſelf to whom it pleaſeth God. If a skilful Gardener ſhould happen into a Garden, where he ſhould ſee that wonderful Vegetable, *Noli me tangere*, (which at the firſt was brought from the *Eaſt Indies*, therefore planted and cheriſhed with great care and admiration in great mens Gardens) of which he had read ſo many portentous things, *viz.* That refuſing every touch, it would fall to the ground. And although he had never before ſeen this Herb with his Eyes, would he not certainly apprehend this to be that very Herb? for the Vertues attributed to it argue that it cannot be any other. So he whoſe eyes it hath pleaſed God to open, ſo that he can apprehend all the Properties to be in a ſubject, which the Philoſophers affirm to be in their Univerſal Mercury, Will he not, acquieſcing in that, deſiſt from ſeeking out another?

Laſtly, *Sal Nitre* is the only growth, generation, and encreaſe of all Vegetables, Animals, and Minerals, as alſo their Deſtruction, and Regeneration, by a perpetual Circulation of the Elements, by which things being

being diſſolved, do again return into the ſame from which they aroſe: For the Nitre of Vegetables in the bodies of Animals, by the intervening digeſtions and ſeparations, is generated into a Mineral Salt, which none will deny: and Nitre or Salt of the Earth, is Vegetable, Mineral, and Animal, which cannot be ſaid of any other ſubject, but the Univerſal Matter. And even as it is the chief Conſerver of Vegetables, Animals, and Minerals, ſo it is alſo their Deſtroyer and Death; therefore by them it is both loved and hated. Vegetables love it, when growing in the Earth, they thence draw their nouriſhment; for when the Earth is dead, or void of Salt, it affordeth neither nouriſhment or encreaſe to ſeed, Chriſt himſelf being witneſs, when he ſaith, *Ye are the Salt of the Earth:* but if the Earth be deſtitute of Salt (or the Salt hath loſt his ſaltneſs) it is altogether dead, and can bring forth no Fruit. An ignorant man ſaith, that Dung maketh the Earth fruitful, but undeſervedly, for not the Dung, but the Salt which lies hid in the Dung, doth this, which is generated of Vegetables after their putrefaction, and again tranſmuted into their ſeeds and roots which are in the Earth; the ſame Animals again receive in their food, whereby their bodies are ſtrengthned and preſerved from Corruption. For no man is ſo rude, but he hath learned by experience, that Salt is the Preſerver of things both living and dead. But an ignorant man may object, that other things alſo have a preſervative Power, as myrrh, aloes, and other Balſamick Liquors, which preſerve Fleſh and Fiſh from putrefaction. To this I anſwer, That it is not myrrh or aloes, but their ſalt, which effecteth this. Honey alſo and ſugar preſerve things, which are not ſalts. I anſwer, That thou underſtandeſt not the nature of Salts; thoſe are ſweet ſalts, the other are bitter ſalts, which by putrefaction are changed into ſowre and acid. Alſo every burning ſpirit of Wine, and other Vegetables, preſerveth other bodies, although they are not in form of ſalt, nevertheleſs it is nothing elſe but the moſt pure volatile ſalt of the Wine; mixed with its ſulphur, which doth this; for none of the Principles is ſincere, and wholly free from the mixture of the reſt. Vinegar doth the ſame thing, and is a meer ſalt, which if time would permit, I could eaſily demonſtrate. What man's ſenſes are ſo dull, that he cannot underſtand one thing to paſs into another, by the mediation of putrefaction, to him even great Volumes would profit nothing. From the ſweeteſt Muſt (or new Wine) Sugar, Honey, by the help of putrefaction and Fermentation alone, is made an acid Tartar, a ſtrong Vinegar, and a volatile burning Spirit; all theſe will preſently return into a nitrous ſalt, which few underſtand, thoſe eſpecially who are believed to know much. Not only Man is delighted with ſalt, without which he cannot be ſound and in health, but alſo all Animals. Mice, above all, are very greedy of Salt, the which if they find not, they lick the ſaline efflorescences of Walls, and make a very nitrous Urine. Pigeons alſo frequent old Walls, which abound with ſalt. Hens pick out the grains of Oats from Horſe-dung, which are full of ſalt, preferring them to freſh Oats, and thence become more fruitful, in laying more Eggs, the ſalt concocting the ſmall ſtones which they ſwallow, in their Ventricles, is the firſt matter of Eggſhells; but if, being ſhut up in Pens or Coops, they have not that ſalt earth, with the ſmall ſand or ſtones, which they uſually devour, or their ſtomachs being weak, doth not digeſt them, the Eggs they lay afterwards, will be ſuch as we call windy Eggs, having no ſhells, or ſuch as are very imperfect. Minerals growing in the bowels of the earth (Experience being witneſs) rejoice in ſalt, from which they aſſociate to themſelves bodies, and make an encreaſe: In like manner, they love it out of the earth, and by it are ripened and meliorated; amongſt which Salts, Nitre, as I have ſaid, is endowed with a ſingular ſympathy towards Metals. On the contrary, Minerals as well as Animals and Vegetables, abhor ſalt, if they be unduly aſſociated with it, for ſo they are corrupted and deſtroyed; for ſalt being adhibited in a due manner, is the only preſerver, augmenter, and perfecter of Vegetables, Animals, and Minerals, which all the Philoſophers confeſs; amongſt whom, *Plato* aſcribeth to ſalt ſomething divine, to whom ſucceeding Ages have aſſented, ſeeking many things in ſalt, yea, even the ſtone of Philoſophers it ſelf; but being ignorant what a true ſalt was, and of the manner of applying and preparing it, they could not make any further progreſs. Hence any man may eaſily ſee why the Ancients called thoſe Secrets by the name of *Alchymy*, *viz.* as a certain handling and melting of ſalt, for which reaſon alſo they familiarly uſed theſe words; *In Fire and Salt conſiſteth the Magiſtery*: Implying, that by the benefit of fire and ſalt, a true Medicine was to be prepared, as well for the health of men, as for the perfection of Metals.

If God prolong my Life, and grant me opportunity, I will hereafter, for the good of Mankind, openly declare what *Salt* and *Fire* are, that the incredible Vertues of thoſe two bodies, as yet unknown to the World, may be made manifeſt to all Men. One thing I will add, that the Philoſophers pointing out the Univerſal matter, ſpeak obſcurely, when they ſay, that it is every where to be found, that the Poor hath it as well as the Rich, and that no man can live without it, whence many have ſought for Air, Rain, Snow in *March*, *May*-dew dreaming the univerſal matter to be in thoſe, and when their labour hath happily ceaſed, they have obtained ſomewhat of a nitrous ſalt. It is certain, that the Stars do impregnate the Air and Clouds with their Catholick ſeed, which preſently falling in form of Rain, Snow, and Dew, render the Earth fruitful and fit for germination, and that they are again drawn upwards by the warmth of the Air, leaving their Nitre in the earth, to be again impregnated by the ſtars, and again to deſcend to conciliate the fertility of the earth, leſt the earth at any time ſhould labour under a want of this univerſal ſeed, but continually applieth it ſelf to the vegetation of things, and preſerveth a perpetual Circulation of the Elements. Hence *Hermes* hath written, that *That which is above is as that which is below.* Yet nevertheleſs, we need not ſeek it among the ſtars, ſeeing that it may ſufficiently be had, by a far ſhorter way, at hand, and before our feet. For ſo much the words of *Hermes* intimate.

The Words of the Secrets of HERMES.

TRue it is, and remote from every cloak of a Lye, that whatſoever is below, is like to that which is above; by this the wonderful things of the work, of one thing, are acquired and perfected, even as alſo things are made of one, by the conſideration of one, ſo all things are made of this one by conjunction. Its Father is the Sun, its Mother the Moon, the Wind carrieth it in its belly, the Earth is its Nurſe, the Mother of all perfection. Its power is perfect, if it be changed into Earth; the ſubtile and thin being ſeparated by the fire from the groſs and thick, and indeed prudently with moderation and wiſdom; this aſcendeth from the Earth unto Heaven, and again deſcendeth from Heaven to the Earth, and receiveth the power and efficacy of the ſuperiours and inferiours. In this manner thou ſhalt acquire the glory of the whole World; thou ſhalt drive away all darkneſs and blindneſs, for this is a Fortitude excelling all other power and ſtrength, for it is able to penetrate and ſubdue all things, as well thoſe which are thick and hard, as thoſe which are ſubtile. In this manner the World was made, and hence its admirable conjunctions and wonderful effects, ſeeing that this is the way by which thoſe wonderful things are effected; and for this reaſon I am called by the name of *Hermes Triſmegiſtus*, ſeeing that I have three parts of the wiſdom and philoſophy of the whole World. So I conclude my Speech which I have made concerning the *Solar Work*.

Theſe are the words of the moſt ancient Philoſopher *Hermes*, who for his perfect knowledge of Nature, is deſervedly ſtiled *The Father of Philoſophers*; in which words he hath ſufficiently hinted, That his little Bird without wings (which flying day and night is not wearied) is the Spirit and Life of the ſuperiour and inferiour Elements, the Conſerver of the ſuperiour and greater, and of the inferiour and leſſer World, and that it lies hid in Nitre: For the better underſtanding of which, let a man throughly conſider the Air, in which the *Univerſal Spirit*, the firſt Ens or Being of all things, dwelleth, without which no Animal can live a quarter of an hour, nor any Vegetable or Mineral be produced; neither can the Sun ſhine, nor the Fire burn. Even as the Excrements of Vegetables, Animals, and Minerals, by a continual Circulation, are tranſmuted into Elements, the Elements into Excrements, and thoſe again return into Aliments, by an unceſſant renovation and tranſmutation, which Man only doth not attain.

The *Husbandman* knoweth that the Leafs, which every year fall from the Trees, afford a new vigour and nouriſhment, that the Excrements of Cattel produce very good Graſs, that the Fæces or Recrements of Minerals, from which a Metal hath been once ſeparated, is in a ſhort time impregnated by the Stars, that being melted, they again yield the ſame Metal which they had done a little before: and the *Scoria* of metals are every where returned to their Mines, where in a years time being recruited by the attractive power of the Univerſal Spirit, they are again impregnated, ſo that they again by melting afford metal. Doth not the Earth, from which *Salt-Petre* hath been extracted, being expoſed to the Air in the interval of ſome months, yield other *Salt-Petre*, and this as often as you will, as if nothing had been extracted from it? Doth not all things which are calcined, *viz.* Lime made of Stones, Shells, Woods, Herbs, from which the Fire hath forced the Univerſal Spirit, by a very ſtrong Appetite or Magnetiſm, draw the Univerſal Spirit again afreſh, and return into a Corporeal Nitre? Is not the heat and vertue of the ſun, the excrement or ſuperfluity of the ſun, by which it is nouriſhed and ſuſtained? If heat were nothing to the ſun, the Air, by its Nitrous Eſſence, could never render it weighty, nor cauſe it to diſtill in fruitful Rains; nor could the Earth bring forth Fruit, and afford freſh nutriment and food to the ſun, its conſerver: Whence it followeth, that an Excrement is alwaies the conſervation and nouriſhment of that thing which makes or ſeparates it. But here *Plato* commandeth to reſt; at another time (God willing) more ſhall be ſpoken. We have heard, that in ſalt eſpecially in Nitre, although ſlighted by the unskilful, there are found moſt potent and profitable vertues, as well for *true Medicine*, as for *Alchymy*. Nor is it reaſonable that any man ſhould be offended with its cheapneſs or low eſteem; but he may rather think, that that which is deſpiſable before the World, and imaginary Philoſophers, is moſt precious with God, and thoſe who know the myſteries of Nature. Therefore it remains, that in the nature of things there is not a better ſubject, by which more and greater wonders may be performed, than *Sal-Nitre*. Therefore, I alſo conſtantly affirm, That of it may be prepared the true *Mercury of Philoſophers*: but I will not ſay, that I know the Preparation of the *Stone of Philoſophers* from it, becauſe I never went ſo far: But thoſe things which I have delivered concerning it in the correction of metals, and other good Arts, Experience alone hath taught me; in which I acquieſce, and all thoſe things, if the matter ſhould require, and it ſhould conduce to a good end; I ſhould not bluſh to demonſtrate ſingly through their parts, that it may be laid open to all men, that all theſe things may be performed, but not by every man; ſeeing that I have not written for that end, that they ſhould be proſtituted to all men, for then I ſhould have wrote more fully, but that they might remain in the power and cuſtody of Friends. It can hardly be believed, what great troubles my Writings have created me, while one accoſts me from this place with long Letters, willing me to unfold this or that Others addreſs me with a great Catalogue of Queſtions, of which, if I ſhould anſwer the tenth part, I ſhould ſcarcely have Bread to eat.

If the LORD ſee good, he will afford me time and occaſion of doing yet better things, but if not, let the Reader accept the *will for the deed*: Truly, there are many Sciences of great moment in my Poſſeſſion, by which I could point out a ſafe path to Poſterity, for the attaining of higher things, but becauſe I have alwaies ſtudied to maintain my Family, with my own honeſt labour, without detriment to my Neighbour, I am (contrary to my *genius*) prohibited to publiſh more, being conſtrained to apply my hands to ancient labours. Some

may

may inferr; If thou haſt found out more, act by others, thy hands being ſuſpended from the Work, let it ſuffice thee to have diſpoſed of thy labours. But he that ſhall thus ſay, confeſſeth himſelf, not to know the World to be perfidious: If I could have been made partaker of faithful Operators, I ſhould long ſince have had a free proſpect of my affairs.

But it is not at that paſs as many believe, men are now perfidious, keeping no promiſes, every one ſeeketh his own, right or wrong; Benefits are rewarded with evil, which hath happened to me more than once; when I have adopted one for a faithful fellow-labourer, the contrary hath happened: For as ſoon as he hath learned any Secret, believing himſelf to be more learned than me, hath feigned divers excuſes to get away, which if he could not effect openly, and with Conſent, he hath attempted it privately; or hath carried himſelf ſo petulantly, that I ſhould thank GOD to be freed from him. Whence it came to paſs, that I alwaies loſt my purpoſe, perceiving the Proverb to be true, *He that will have his buſineſs well done, muſt be both maſter and ſervant.*

But I truſt, that in a ſhort time after my death, thoſe who ſhall diſtribute my Laboratory among them, where I have made a ſtand, will further ſearch out the ſecrets of Nature, and being lighted by my Torch, will come to the deſired end: but it will be much more grateful to me, if my Secrets, which I have found out with great Coſts, Labour, and Care, ſhould be known to many, than that they ſhould be intombed with me, without Uſury. To which end I will alwaies, according to my power, be a moſt ready helper and Counſellor, for the ſake of Poſterity.

Thomas Joha Frieder Caſſell Dawn'd
Apprentice to THE Samuell Speyer Stort Surgeon
ani Apothecary
Penryn Cornwall
Sept 29th 1832

EXPLICATION

OF

Miraculum Mundi.

Set forth

In Teſtimony of the truth of that Matter, and for the Advantage of the Lovers and Followers of *ARTS.*

Reader,

IN the firſt place, before I prove and verifie the powers and vertues of the aforeſaid Univerſal ſubject, which I have attributed to it, in every point, it will be neceſſary to make known after what manner the mentioned Salt of the Earth performeth its Operations, that the benevolent Reader may not be confounded, nor imagine that it exerciſeth all its Operations in one only manner and way, to wit, crude, as it is of it ſelf; for it doth not ſo, but it exerteth its power in three manners, forms, or figures. For Example ſake; *Its firſt Uſe is in many Buſineſſes and Arts, as it is ſimply drawn from the Earth, being purified, and is known to all men. It is applied to another uſe, being firſt calcined by fire, and changed and exalted into a more fixed ſubſtance. Again, for another uſe, it is firſt deſtilled into a volatile Spirit,* and Aqua-fortis. *And ſo that ſubject performeth its Operations in Figures, ſimple, as it is in its ſelf, in form of a Sun;* ſecondly, *as a fixed fiery Liquor;* thirdly, *in the figure of a volatile ſpirit, or corroſive* Aqua-fortis; *as ſhall be demonſtrated below, from point to point, in order.*

Point I.

In the first place all Fossiles, by the mediation of this Subject, may be perfectly examined, what Metals they properly contain, how many, and how much of each.

FOr the verifying and demonstrating this first point, I will begin to shew, that Minerals may be most commodiously proved by the Mediation of the Salt of the Earth, and in what manner this is to be done. First, The Mineral is to be finely powdered, whether it be *Gold*, *Silver*, *Copper*, or *Lead*. To a hundred weight of this, add three or four hundred weight of Calcined or fixed Nitre, [Note, *That the small Say weight is here meant*] mix all very well together, put the mixture into a very strong Pot, which is to be shut with its Cover, set it upon a small foot in such a melting Furnace, as is described in the fourth part of my Furnaces, kindle the fire by degrees, and let the minera, or Ore flow well with its liquor in the Pot, like water, then pour it out into a Vessel fit for this purpose, suffer it to cool, then take out the Regulus; if it be ☉, ☽, ♀, or ♄, weigh it in a Probatory Balance, and you shall find how much ☉, ☽, ♀, or ♄, there is in that Ore. NB. That Iron and Tin cannot be proved in this manner, for ♂ is not fusible in such a fire, and ♆ is reduced into *Scoria* by Combustion, by reason of the Salt. NB. That if the Regulus of ☉ or ☽ come not pure, or contain any ♀ or ♄, suffer it to run upon a Test or Cupel, with a little ♄, till it sparkle and shine, and you shall have the Metal fine, which is a proof that may securely be trusted, and according to that a Computation may be made, without any fear of fraud or Sophistication; the Regulus of Copper or Lead, need no other trial, but are judged good. NB. That if the Ore be stubborn, and yields no Regulus in the first melting, let the Pot be again set into the Furnace, (if it be yet whole, putting to the Ore, giving no Regulus, a piece or two of Iron) being covered, least the Coals fall into it, suffer it to flow, then the iron entereth into that untameable Sulphur, existing in the Ore, and hindering it from passing into Regulus, and suffereth the Gold, Silver, Copper, or Lead, contained in that Mineral, to fall down, which is to be poured out into a fit vessel, and the Regulus will settle to the bottom, which being cold is to be separated from the Scoria; but if you will prove whether or no the Gold containeth any Silver, or the Silver any Gold or Copper, or the Lead any Silver or Gold, then suffer the Regulus to flow upon a Cupel, till it sparkle with a Splendour, and afterwards make separation by *Aqua fortis*, and you shall find how much of every Metal is permixed with the other. There is no need to describe this separation at large, because it is every where known, and now very perspicuously taught by *Lazarus Erker*, so that it needs no repetition: I have here shewed, and proved, that by the Mediation of Nitre, Minerals may easily and speedily be examined. Therefore, this first Point being now proved and verified, I give thanks to God, who I trust, will further assist me.

Point II.

The Marchasites of Gold and Silver, being melted by the Mediation of this, by a singular Compendium, hitherto unknown, do afford more Metal than by the common way.

THat which is contained in this second point is not the least amongst my Lucriferous Secrets, but one of the best, which I have always reserved most secret within my own Breast. Many Men have often allured me with fair Speeches, to demonstrate it, but hitherto I have not been prevailed with to do it, not out of envy, or that my self alone should have that art at command, bnt because Faith is hardly any where to be found, it is now reputed an honour to promise many things, and perform few, but a disparagement to keep Promises; for I have often learned to my loss, that when through fair Words, and Promises oftentimes more than I required, I have been perswaded to Communicate this, or that Secret; as soon as it hath been out of my hands, I have found the quite contrary, for instead of a Reward, they have either derided me, or began to quarrel and contend, and in this manner, the Benefits which I have confer'd upon them, have been recompensed with great Impiety.

The Process followeth.

Let there be a Furnace built of good Stone, which is able to endure the Fire, small or great, as you please, or according to the necessity and commodity of your Labour, in the following manner. First build an Arch about a Cubit high from the ground, the which cover and make level above with Iron Plates, or Stone that will hold the Fire, which shall be the foot of the Furnace, the length of which ought to exceed the breadth four times, that is, it ought to be four times as long as broad; by this Arch or foot of the Furnace there is yet another Furnace to be erected, whose bigness within must be half the breadth of the long Furnace, and about two Cubits high from the wind holes, into which the Wood is to be put, and in that Furnace, on that side which adjoineth to the melting Furnace, is to be a hole, through which the flame of the lighted Wood may strike upon the Hearths of the Furnace; and heat them; above, let there be an Iron Cover, to that end that when the wood is put in, the Furnace may be covered with it, and the flame may be forced to enter by the side into the Melting Furnace, and let the Melting Furnace, the Hearth being now perfect, be divided according to its length, into three Chambers or parts, so that every Chamber be square, that is, as long as broad, and between every Chamber let there be a Wall, with a hole in the lower part, that the flame may pass freely into the second and third Chamber, between which two let there be also the like Partition or Wall, with its hole at bottom, and let the third or last Chamber be close, saving its little door, let it have one only hole, by which the flame may pass out, also on one side of the Furnace, there is to be a hole in every Chamber, by which the Hearths may be discerned, and the Minerals and Metals taken out and put in, but the Chambers are not to exceed a Foot, or a Foot and a half, in heighth; in the upper part of which, let there be a Cover or Cap of good Earth, well luted and accommodated to it in such manner, as whensoever need shall require it may be

be removed with a pair of Tongues, and put on again. All theſe things being thus rightly prepared, let a Hearth be made in the firſt Chamber of good Earth, which can ſuſtain the fire, let the Earth not be too fat, or too lean, but of a middle condition; in the ſecond let there be a Teſt made of Argill, or Wood Aſhes, but in the third Chamber, let there be a Hearth of good Earth, and in the Name of the Lord, let the fire be kindled in the ſide Furnace, that the Furnace with its Hearths may be throughly dried. Which being done, let the Ore of ☉ or ☽ being rightly prepared, be put into the laſt Chamber, that it may be made hot by degrees, and burn, but not melt, which may be hindered by the help of the little door, and the fire may be governed at a beck, according as it ſhall be neceſſary, and the Mineral requireth, or ſhall be able to ſuffer; the Minerals are ſometimes to be ſtirred and turned well about in all parts, with an Iron Hook or Ladle, that they may be well Calcined. In the firſt Chamber let there be put ſo much Lead as the Hearth will hold, and when it moveth well, put upon it, ſpoonful after ſpoonful, of the Calcined Mineral in the laſt Chamber, ſtirring it with the Lead, and turning it with an Iron Ladle, and let it be ſo long upon it, till the Lead ſhall have attracted all the Metal, then the Scoriæ are to be taken out with an Iron Ladle fit for this work, and to be kept by themſelves; then again, more of the Calcined Mineral is to be put upon the Lead, and ſo the melting, turning, and taking out of the Scoriæ, is to be continued as long as there is any of the Mineral at hand, or as much as is ſufficient for the Hearth; and if during this labour, the Lead ſhould be impregnated with a ſufficient quantity of Gold or Silver, by the Mineral, (which may be perceived by taking a little out in a Spoon, and examining it upon a Cupel) then let Nitre be burned upon it, and let it be repeated two or three times, for ſo the Lead will be purifyed, grow white, and be rendred ductile, and paſſeth freely in the Teſt, without waſte, which yet would not be if it had not been firſt depurated by Nitre; the Lead into which the Gold and Silver hath paſſed, is to be taken from the Hearth with a Ladle, and the Hearth made of Aſhes, in he middle Chamber is to be filled with it, and the Bellows to be planted againſt it, to blow the Coals to the other ſide, and according to the common manner, the Lead is to be deduced into Salt, and the Cake of Gold or Silver is to be taken out, and afterwards to be throughly depurated in good Teſts: And ſo in that Furnace may be performed three Labours, and more of the Gold and Silver is retained then by any other way, for blowing with Bellows waſtes and deſtroys much of a Metal, and reduceth it by burning into Scoriæ, which the ſweet flame of wood doth not do; the Scoriæ being taken out, ſuffer them to paſs through a high Furnace, that if there be yet any Lead among them, it may be ſaved, to be uſed again in the former Labours, (to wit for attracting Gold and Silver, in the firſt Chamber, from the Minerals Calcined in the laſt) in this manner nothing will be loſt, and not only more Gold and Silver obtained, but alſo without ſo great a charge of Coals as is uſed in the ordinary way. You ſhould have always two of thoſe Furnaces, or more (if you have a great quantity of the Mineral) in your Elaboratory, that whilſt you work in one, the other may be repaired, and when there is need, furniſhed with new Hearths.

This is the beſt and moſt profitable manner of melting the Ores of Gold, Silver, and Lead, containing in themſelves Lune, and this without Coals, and ſtrong blowing, but by the flame of wood only. A. the Foot of the Furnace, B. C. D. the three Chambers, E. F. G. the three little doors of the Chambers, by which the Minerals and Metals are put in and taken out, H. the Cover or Cap of the Furnace, I. the Wind holes, or Regiſters by which the flame is governed, K. three holes in the Walls, or Partitions of the Chambers, through which the flame paſſeth, for the heating of the Chambers and Hearths, L. the Furnace on the ſide, into which is put dry wood, M. the Aſh hole, N. its Cover or Stopper, M. the hole in the ſide, by which the flame is conveyed into the Chambers, P. the Iron Rods, with which the Minerals are turned, whilſt they are in torrefying and the Scoriæ are taken away from the Lead, Q. a Spoon or Ladle, by which the torrefied Mineral is put upon the flowing Lead, and the Lead which is impregnated with Gold and Silver, is removed from the firſt Melting Hearth to the other, R. the Tongs with which the Cakes of Gold and Silver, are taken from the ſecond Hearth, S. the Furnace in which the Cakes of Gold and Silver are perfectly depurated, T. the Teſts, V. the Cineritia. NB. That the Works coming from the firſt Hearth, may alſo be perfectly finiſhed in the ſecond Chamber, but it is better to do it on Teſts fit for this purpoſe. [*The figure of this Furnace is not printed in the Latin Copy, nor to be found among the other Originals.*] NB. That what concerns this Point, is of greater moment than many will believe, becauſe in our Country, there are found in many places rich Mines, abounding with Gold and Silver, which nevertheleſs are not rightly depurated by the common way of Melting, ſo that they afford ſo little, that it will not pay the charge of the Coals; and therefore it is yet unknown how much good Metal they contain, but it lies hid in obſcurity, which nevertheleſs might be very well perfected in this manner, with great profit. I know Mines of this ſort in various places, which I have found very poor, according to the common way of proving, but according to my Method very rich. What Treaſures doth *Hungary*, *Bohemia*, *Carinthia*, *Stiria*, and *Saltsburg* poſſes in their Regions, unknown to them, and yet after an eaſie manner to be obtained? What Treaſures hath *Miſnia*, *Thuringia*, *Brunſwick*, and *Fichtelburgh*, hid in them, and do no good? There is no Man of a ſound mind, but may eaſily by labour and obſervation diſcern what a great difference there is between the common way of Melting, and mine, if he ſeriouſly conſider the matter. A Mine of Lead doth not want an exquiſite Art of melting, becauſe it is of ſmall price, nor will the loſs be great, if ſome of it be burnt in melting, or remain in the Earth. In like manner the vulgar way of melting Copper, by high Furnaces, and ſtrong blowing, is ſufficient. But the Mines of Gold and Silver, are not to be treated ſo groſly, but after a more ſubtile and profitable manner, that nothing of them may be loſt, but may be of greater uſe and profit, than hitherto hath been done. For the Mineral of Gold, although it is not in ſome great Rocky Mountains, yet for the moſt part, it is found in Flints, and Stones containing Iron, or in any crude Mineral in which ofttimes Antimony, red Sulphur, and Arſenick, is mixed together with the Minera of Gold. As may be ſeen in *Carinthia* and its Confines. But how ſhould ſuch a Mine, if melted with Coals after the common manner, yield its fruit without loſs; for whether it be torrefied, or not, if it be caſt upon Coals, and agitated with the ſtrong blaſt of Bellows, that which is immature flieth away, carrying with it

ſelf that which is good; that which remaineth paſſeth into Scoria. For although it ſhould be mixed with Lead, the Minera of Lead, or Salt of Lead, yet they would not remain conjoin'd, but the Lead is eaſily melted, floweth, and leaveth the Ore, which by ſtrong blowing is reduced into Scoria, retaining much gold, which ſo is loſt, as well as the other which flew away in ſmoak, and at the beſt but a very little ſaved, which hath entred the Lead.

NB. But, in my way, it is neceſſary that the Ore ſhould be broken and ſubdued, and thereby forced to yield its Gold, if it be well incorporated with the lead, and the volatile is preſerved with the fixt; add, that the flame lightly ſtriking or playing upon the matter, deſtroyeth nothing, and by this way, there is no metal loſt. That the thing is ſo, I will prove by a certain ſimilitude or compariſon; make proof in what manner you pleaſe, of gold or ſilver Ore, and obſerve how much good metal that contains, afterwards prove the ſame in a great quantity upon Coals, and you ſhall find much leſs in that, than in your ſmall proof; when nevertheleſs the contrary ought to be, becauſe a great fire hath a greater force of acting upon the Ore, than a ſmall one; and this is the only cauſe, becauſe a great quantity requireth a more violent fire than a ſmall one; which is averſe to all crude and volatile Minerals. But by my way, there is found as much, if not more, in a large quantity, as in a ſmall proof. Therefore I will here ſhew yet by another manner of probation, that by the common and uſual way of melting Minerals, all the metal cannot be obtained, and ſometimes ſcarcely half or a third part. To an hundred pounds of the Mineral, reduced into a ſmall powder, add 8, 12, 16, or 18 pound of granulated Lead, or as much as the Mineral ſhall need, mix the Mineral and the powder of Lead, which with a little Spoon are to be committed to a fiery hot Cupel, placed under a Cineritium or Muffle, give a ſtrong heat, and the Lead will attract all the metal from the Ore, and caſt out the Scoria or droſs, which will reſt upon the moving Lead; which being done, you muſt have at hand a hot Iron Rod, with which you may move and ſtir the Scoria every way well, up and down upon the Lead, to the end, that if any good metal ſhould as yet remain in them, the Lead by that moving may lay hold on it, and catch it to it ſelf; afterwards ſuffer the Scoria for a little while to heat and burn upon the Lead, that it may flow well; then let the heat of the fire ſomewhat abate, and the Scoria will become thicker and fit to be drawn out with an Iron rod, which is to be broad at the point, round, and ſharp, that the Scoria may be every where clean and wholly drawn away from the Cupel, which are diligently to be kept, that nothing be loſt, and leſt the future eſſay ſhould be falſe. This being done, drive the Lead remaining in the Cupel with an indifferent heat, then there will remain the gold or ſilver, which that hundred pounds of Ore did contain; that grain or portion is to be taken out and reſerved. NB. That whilſt you are proving the Mineral, you may alſo impoſe another Cupel, of the ſame magnitude and weight, and as much Lead upon it as was mixed with the mineral, without it, ſuffer it to flow alone by it ſelf. The grain or portion which comes to be obtained from the mineral upon the other Cupel, will be what that mineral did contain. Afterwards the two Cupels are to be weighed apart, and as much as this, in which the Ore was wrought, ſhall be heavier than that in which only the Lead flowed, ſo much of Lead or Copper that hundred weight of Ore did contain; and ſo much gold or ſilver as the grain or portion remaining in the Cupel weigheth, and ſo much Scoria or droſs as was removed and drawn out with the Iron Rod.

NB. Some man may object, That the *Scoria* cannot be ſo accurately and purely removed from the Cupel, but ſomewhat will be left behind. I anſwer, That although the removing of the *Scoria* ſhould not be exactly done, which notwithſtanding may be done, if diligence be uſed, becauſe the *Scoria* to be removed are not pure *Scoria*, but as yet contain ſomewhat of the Lead, which may be eaſily as heavy, yea, heavier than the *Scoria* remaining in the Cupel, and which cannot be removed, nevertheleſs the proof will be juſt and good. But if by a melting made in a great quantity, you ſhall find as much ☽ or ☉, ♀ or ♃, (NB. that Iron and Tin cannot be proved in this manner) as the ſmall proof demonſtrated, [I think it ſhould be, if you ſhall not find *&c.* and the character ♃ ſhould be ♄.] believe that you have not rightly proceeded, and that that which is loſt is gone in fume, or by combuſtion, into *Scoria*. Seeing therefore that this proof is of a great weight, and accordingly is to be made by a great melting Work, I will declare that labour more copiouſly. *For example ſake*, I take two Cupels, accomodated to one and the ſame form, I weigh them ſingly, if one be heavier than the other, then with a knife I pare or ſcrape it a little above or below, ſo that they may be of equal weight, afterwards I put them ſide by ſide conjunctly, or one before, and the other behind, under a Cineritium; when they are duly hot, I put upon one the Mineral, mixed with the granulated Lead, and upon the other, the granulated Lead only; then I ſuffer them to flow together, ſeaſonably abſtracting the *Scoria* from that where the Mineral is; then I cauſe both to ceaſe. Now ſuppoſing that I have added to the Hundred weight of Ore, 1200 pounds of Lead, and alſo wrought 1200 pounds of Lead in the other Cupel alone, and each Cupel to have weighed three Lothones, according to the weight of the City, and that I find in that Cupel in which the Mineral was wrought, a portion of Gold or Silver, weighing (according to the probatory weight) nine Lothones, and in the other Cupel, a portion of Silver weighing three Lothones, which the 1200 pounds of Lead yielded: But in regard that I alſo added to the Mineral 1200 pounds of Lead, which alſo have yielded three Lothones, which I ſubſtract from the nine Lothones, and there remaineth ſix Lothones of Gold and Silver, which the Hundred weight of Ore hath yielded. NB. If you would know whether the Mineral alſo containeth Lead and Copper, and how much, then I weigh both the Cupels apart, obſerving how much that in which the Mineral was wrought is heavier than that in which the Lead was wrought alone, and ſo much Lead or Copper I may affirm to have been, together with the Gold and Silver, in that Mineral; ſuppoſe the Cupel in which the Mineral was wrought to weigh 30 pounds, according to the probatory weight, more than that in which the Lead was agitated alone, then I am ſure that there was ſo much Lead or Copper in that Mineral, together with the gold and ſilver (for iron and tin do not enter the Cupel, but paſs into *Scoria*, but the ☉ and ☽ remain on the Cupel) and the remaining weight, to wit, ſeventy pounds, I find all in *Scoria*, for a little flieth away in fume: in this manner it may be obſerved what quantity a hundred pounds of the Ore of Lead or Cop-

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per containeth of good Metal, and whether it have any gold or ſilver or not; according to which a computation may be made, whether it will pay the Charge in a great quantity, or not, and what gain may be had from it. This is a moſt deſirable proof, invented for the uſe of gold and ſilver, which are neceſſarily by this way yielded in great quantity; if it happen otherwiſe, the errour is to be aſcribed to the working; for the Mines of copper and lead, this proof doth not ſucceed in great quantity, although by it may be certainly known how much of either of them is contained in an hundred weight of Ore, for both theſe metals are eaſily burnt by the fire, and reduced into *Scoria*, which happeneth not to gold and ſilver, if they be rightly handled; only here it is made appear what quantity of *Saturn* or *Venus* is contained in an hundred pounds of Ore of *Saturn* or *Venus*, which is impoſſible to extort in great quantity, by the common and known way: for ſoft and ſulphureous metals of this ſort loſe much, becauſe part is driven away by ſtrong blowing; another part is reduced into *Scoria*: but by my way nothing is loſt thus, and but very little remaineth behind. I know yet another way, and that better too, of perfecting the Minerals of gold, ſilver, copper, and lead, with a certain compendious profit; but ſeeing that in my *Miraculum Mundi* I have made no mention of a Work of this ſort, I ſhall here ſay nothing of it. I alſo know a way of extracting from very poor Copper Mines, all the Copper contained in them, without great labour and coſt; which Mines are every where in great quantity to be found, but are not ſufficient to pay the Charge of melting in the common way; but this my ſecret way will yield great profit, for ſcarcely one pound of Copper will remain behind, and be loſt in an hundred pounds of *Scoria*.

Point III.

The volatile and immature Marcaſites of Sol *and* Luna *are fixed in the ſpace of three hours, ſo that they render a double quantity of Metal, to what they could have done before fixation*, &c.

THis fixation is a ſingular ſecret, in perfecting Antimonial and Arſenical Minerals, which are wholly crude, which commonly yield a little Gold: For when Minerals contain much Antimony, Arſenick, or Orpiment, and are torrefied in the common way, then the Arſenick or Orpiment deſtroyeth much of the Gold, carrying it away in fume; but if they be melted without a foregoing torrefaction, then the blowing forceth away more; if from a Mineral of this ſort, the yellow or red Sulphur, Arſenick, or other rapacious ſubſtances, be diminiſhed or conſumed, by cloſing it in Earthen Veſſels, as many do, then by this means the Mineral is burnt, loſeth its flux and ingreſs into Lead, ſo that much of the gold is deſtroyed, and reduced into *Scoria*; to prevent which, this following way is the beſt: With one part of the mineral mix half a part of Nitre, let it be kindled with a Coal, and fixed, then the Nitre burneth away the greateſt part of the rapacious ſulphur, and fixeth the reſt, ſo that there is but little of the Gold loſt, and it keepeth its flux and ingreſs into Lead; if it be put into the foregoing Furnace, and there wrought, it yieldeth all the gold and ſilver which it containeth, and nothing is loſt. Here ſome may object, and ſay, That although in this manner, more gold may be obtained; yet the Nitre maketh the work dear, which I indeed confeſs to be true, if the Nitre be bought at a dear rate, but if by an artificial Culture, it may alwaies be had at hand, it will coſt little, and this torrefaction and fixation, may be perfected with great profit.

Point IV.

All Gold and Silver not purely melted from its Marcaſite, may be ſwiftly purged from every Additament, the ſilver ſeparated from the Gold, by fuſion only, with a ſmall labour and coſt, but in great weight.

THis way of purifying ☉ and ☽ from all addition quickly, and in an eaſie manner, is a thing moſt profitable, and an Art highly neceſſary to be known by thoſe who handle metals; for it is ſooner done, than by the way of cupellating or blowing off with Lead, but is dearer, by reaſon of the Nitre; nevertheleſs, the labour is eaſie and pleaſant, and it is done in this manner: Let a Crucible of impure gold or ſilver be placed in ſuch a Furnace as is deſcribed and depicted in the Fourth Part of our Furnaces, let it be melted, then caſt in ſome Regulus of Antimony, more or leſs, according to the greater or leſſer impurity of the Gold, and according as it hath more or leſs need of cleanſing for its purification. When all ſhall flow and be clear in the Crucible, caſt into the Crucible upon the metal, at ſeveral times, about ſo much Nitre, as there is of addition to the Gold; let it flow, then the Nitre attracteth the Regulus of Antimony, together with the impurity contained in the Gold, which paſſeth into Scoria. And this Proceſs doth not ſerve only for impure Sol and Luna, but alſo for ſuch Sol and Luna which contain Copper, Iron, Lead, Tin, Chalcitis, Aurichalcum, and other metallick and mineral matters, Tin eſpecially, which is difficult to be ſeparated from Sol and Luna by Lead, without loſs. But in this manner it may be quickly and eaſily done. But that my meaning may be the more rightly underſtood and the leſs errour be committed in working, I will here inſtitute the Proceſs clearly, and in expreſs words. Suppoſe to ℔ j. of gold or ſilver, there be two lothones of Copper, and three lothones of Tin (*a lothone is half an ounce*) which I would ſeparate, and if it be done by the known way of blowing off with Lead, there will need at the leaſt thirty or forty lothones of Lead, and nevertheleſs one part of the *Sol* or *Luna* will be loſt; but by my way to two lothones of Copper, and three lothones of Tin, adjoin five lothones of Regulus of Antimony, then abſtract the Regulus, together with the addition of Copper and Tin, by the mediation of Nitre, which may be done in the Crucible in the ſpace of one hour, which by torrefaction and agitation in the common way, could ſcarcely have been done in 10 or 12 hours; beſides nothing of the Additaments is loſt, all remaineth in the Scoria, from which, afterwards, as well the ♃ as the ♀ and Regulus of Antimony may be recovered, to wit, if the Scoria, in which the ♃, ♀, and Regulus of Antimony is, be put into a Crucible, a live Coal caſt in, and then the Crucible covered with a tyle, let them flow a quarter of an hour, pour all out, and you ſhall find in the bottom of the Cone a little Regulus, in which will be the remaining *Sol* or *Luna*, which the Scoria did prey upon; let them be depurated on a Cupel, if

they be not already pure enough: The Scoria being again melted, caſt in a live Coal, ſuffer all to flow well together, again there will fall another Regulus from the Copper, the ♈ & ♂ remaineth, and neither by Coals nor any other art, can be brought into Regulus; but if theſe Scoria be driven through a probatory Furnace, then they alſo yield the Tin again, and that better than it was before. This Proceſs is not only pleaſant, artificial, ſwift and eaſie, by which gold and ſilver is quickly and purely ſeparated from all addition, but there is alſo hidden in it a great myſtery: But becauſe I have only propoſed to prove thoſe things to be true and natural, of which I have made mention in my *Miraculum Mundi*, let what I have now ſaid ſuffice, and what is here deſir'd may be found perſpicuouſly and ſatisfactorily declared in the following Proceſſes.

Point V.

Gold and Silver are eaſily drawn out of Old Tin or Pewter Veſſels, the Tin being preſerved almoſt in the ſame weight, and being made better than it was before, may ſerve for the ſame uſes to which it is wont to be put.

THis Proceſs alſo is very well performed by the mediation of Nitre, *viz.* in this manner. Let the Tin, in which is ☉ or ☽, be reduced into Aſhes, even as Lead is wont to be prepared, for the working of Minerals; and let there be mixed with it as much powder of Nitre, let the mixture be put in a ſtrong Pot which will endure the fire, upon which put ſubliming Pots, let the mixture be kindled in the lower Pot (which is under the Subliming Pots, and muſt have a little hole in the ſide for that purpoſe) with an Iron Rod, red hot, then the Maſs beginneth to burn, and ſendeth many Flowers into the Subliming Pots, the Tin and Salt-peter remaining in the Pot, take out, and melt in a Crucible, if there be much Lead, then that falleth together with the ☉ and ☽, to the bottom of the Crucible, but the Tin with the Nitre paſſeth into Scoria, which if the melted Maſs be poured out into a Cone, they are ſeparated from the Regulus of Lead, and after cooling may be taken out, which Regulus of Lead, by the addition of other Lead, may again be wrought, and in a ſtrong Crucible be reduced into Scoria with Nitre; then there will remain a little Regulus of Lead, which containeth the ☉ and ☽, which was in the ♈. The firſt and laſt Scoria may be reduced by a ſtrong blaſt in a Probatory Furnace, then the Tin will be again obtained, better, harder, and whiter than it was before; the reaſon is, becauſe the Nitre hath conſumed part of the combuſtible Sulphur, and alſo ſeparated the Lead. Although this Proceſs is not done with any great profit, yet nevertheleſs it ſhews the poſſibility; but he that knoweth how to handle the matter, will ſuffer no loſs, for thoſe ſublimed Flowers are of greater worth than Salt-peter and Tin, becauſe they may be prepared into a good Medicine; they are alſo very available in thoſe curious red Colours for Cloth [*Scarlet, or Bowdy*] exalting them in a wonderful manner, and firmly abiding in the Cloth, ſhining, and giving it a fiery ground.

Point VI.

Much Silver may be ſeparated from Biſmuth, the Biſmuth preſerved, a Secret agreeing to thoſe places which abound with that Mineral.

THis Secret is not of ſo little weight as perhaps it will ſeem to ſome; for no Man even to this day hath proved this in the matter it ſelf and with effect, yet ſeeing that it may eaſily be done, *viz.* in this manner, melt Chalcitis in a Crucible, and caſt upon it ſucceſſively ſo much Nitre, until all the Chalcitis ſhall paſs into Scoria, or green Glaſs, pour out the Maſs into a Cone, then the Silver will ſettle to the bottom in form of a Regulus, which was contained in the Chalcitis, then put the Scoria of the Chalcitis into a Crucible and melt them well for the ſpace of an hour, ſo all the Chalcites will be revived, rendred Corporeal, and a little will be loſt. He therefore that can make the Salt-peter himſelf, and needs not to buy it at a dear rate, will hence reap great profit, otherwiſe not; however it proveth that the Salt of the Earth can perform what is here attributed to it.

Point VII.

From old Copper much Silver is ſeparated, the Copper preſerved unhurt, by which Artifice Regions abounding with this Metal, may reap no ſmall profit.

THat this extraction of Silver from Copper by means of the Salt of the Earth, may be verified, you are to proceed in this manner: Mix with the Copper its own weight of Regulus of Antimony, then melt both together, upon which caſt ſo much Salt-Nitre ſucceſſively or at times, until it turn the Copper together with the Regulus of Antimony into green Scoria, then make the fire ſtronger, and cauſe theſe Scoria to flow like water, and luit a Regulus, which although it be not ſufficiently pure, it may be depurated upon a Cupel with a little Lead, and it yieldeth the Silver which the Copper contained. NB. This proceſs is moſt true, and will never deceive any Man, but I do not ſay that he ſhall obtain Riches by this means, but only prove to be true, what I have aſcribed to it in my *Miraculum Mundi*. NB. But he that knoweth how to fix the Scoria, that is the Copper and Regulus of Antimony with Salt, and to melt them into Artificial Stones, or Enamel, ſo that nothing be loſt, he ſhall be ſure not to undergo the Labour in vain; otherwiſe he may caſt in a live Coal upon the Scoria, from which the Silver is ſeparated, when they are in Flux, and let them flow half an hour, then it leaveth the Regulus of Antimony together with the Copper, which the Nitre hath reduced into Scoria, and afterwards another Regulus, to be applied to uſe, which if all things be well handled, from both, *viz.* from the Regulus of Antimony and Copper, (after their Edulcoration) a green colour for Painting may be extracted, and ſo the Labours will be compenſated, and the gain will be ſo much the greater.

Point

Point VIII.

Every common Silver may in the ſpace of a few hours be exalted into the nature of Gold.

THis Gradation of Silver is performed by the help of a certain Mineral Sulphur, to wit, of ♂ and Antimony, in this manner. Adjoin to ☽ as much Regulus Martis, and again let it be ſeparated from it by Nitre, which labour is performed in the ſpace of an hour, to the remaining Silver adjoin again as much Regulus, which is again to be abſtracted; and let this labour be reiterated five, ſix, eight, or ten times, which may be done in one day, afterwards let the ☽ be diſſolved in Aqua-fortis, then the Gold, which the Nitre by the help of the ☽ hath obtained from the Regulus, will remain in the bottom, which is to be edulcorated, and corporify'd with Borax, the Gold will be good in an excellent degree, but the value thereof is ſcarce enough to pay for the Regulus, and Nitre. But he that knoweth how to make his own Nitre, or can obtain it without price, may reap a conſiderable profit: Eſpecially if he know how to transferr the detracted Scoria into further uſe, which is not here ſought, but is only proved that ☽ may be exalted into ☉ by the help of Regulus *Antimonij Martialis.*

Point IX.

Gold may be ſeparated by fuſion from every addition of Copper, Tin, Iron, Lead, Orpiment, Antimony, Arſenick, or the like, without Cupels, each being kept apart.

THis manner of ſeparating of Metals, from one another, and of depurating ☉ without Cupels, is a moſt pleaſing, fair, and profitable ſecret, by which in the ſeparation of Metals, much time and expence is ſaved, and no detriment to be feared, which no man, even to this day could effect, my ſelf excepted: You are to proceed in this manner. Firſt, the mixt Metal, whether it conſiſt of few or many, is to be granulated, the grains are to be conjoined with a fourth part of powdered Sulphur, ſomewhat moiſtened, and to be ſet on fire in a Crucible luted according to art, which being done, the cover of the Crucible is to be taken off, and the enkindled Metal to be covered with the fourth part of its weight of Antimony NB. That if there be much ♂, ♀, or ☿ in the mixture, then the more Antimony is to be adjoined, that it may draw to it ſelf the imperfect Metals. Therefore when the Maſs flows with the Antimony, inject a little well purified Nitre, dried and pulverized, and when it flows well, the Maſs is to be poured out into a Cone, and the Regulus, if there be any, to be ſhaken out, which will contain the greateſt part of the ☉ which was in that Maſs. NB. If there ſhall be no Regulus, that is a ſign that there was not Nitre enough to ſuffice the crudity, which is to be remedied thus: Return the Maſs into the Crucible, and permit it to flow, which being done, throw in as much filings of Iron, as you judge there is Gold in the Maſs, and mix it with the Maſs with a red hot Iron, cover the Crucible, and give a melting fire for a quarter of an hour, pour it into a Cone, when it is cold ſeparate the Regulus from the Scoria, which will be about the ſame weight with the filings of Iron, which you uſed in the precipitation, purifie the Regulus in a ſmall new Crucible, by the injection of Nitre, if it yieldeth Gold without Silver, then it is a ſign there is Gold yet in the Maſs, therefore it is neceſſary to flux the Maſs again, and precipitate with Iron, if the Regulus be yet golden, then it is to be depurated apart by Nitre, and to be kept; but if it hath more ☽ than ☉, it is a ſign that all the Gold is precipitated, afterwards ſuffer the Maſs to flow again, and inject as much filings of Iron, ſtirring them well with the Maſs, with a red hot iron, permit them to flow well together, then it rendereth as much Regulus of Silver, as there was Iron put in, afterwards alſo the ♀ will be precipitated, and laſt of all, the Scoria are again to be fluxed well being mixed with Nitre, that it may appear whether there be yet any Metal in them. The Regulus of ☽ is alſo depurated in the ſame manner as the Regulus of ☉: Venus, ☿, and other Additaments, are melted by Bellows, ſo that nothing is loſt. This ſeparation of ☉ and ☽ from the viler Metals, by melting, hath been long ſought by many, but found by few. *Lazarus Erker*, in his Writings hath taught by what means ☉ may be ſeparated from ☽ by fuſion, but that ſeparation is unlike to this which I have mentioned, becauſe here it is not only ſhewed how ☉ may be ſeparated from ☽, but alſo from other Metals.

Point X.

Every imperfect Metal, without the mixture of other Metals, may be ripened by this Secret alone in the fire, in an hours ſpace, ſo that it will yield Gold and Silver, but without profit; an indication that the viler Metals, may by Art be promoted into the Nature of the perfect, to the great profit of Metallurgiſts.

THis is done only by the power and virtue of Salt Nitre, whereby the Metal is penetrated, depurated, and fixed into a more perfect, or exalted in maturity, but cannot be performed with much profit in a great quantity, but it proveth that Nitre hath a virtue of tranſmuting every imperfect Metal into perfect, which is done in this manner. Let the Metal be laminated into very thin Plates, whether it be ♀, ♄, or ☿, ♂ is indeed corrected by this way, but melteth not in any Crucible, and ♀ alſo is tranſmuted into other forms, but not into ☉ or ☽. Make in a Crucible *ſtratum ſuper ſtratum* with Saw-duſt, Sulphur, and Nitre, as alſo with the laminated Metal, of which mention is made in the ſecond part of Furnaces; kindle the mixture at the top, then a great and ſuddain flaming fire will ariſe, by which the laminated metal is penetrated, partly fixed, and amended, ſo that if it be wrought on a Cupel with Lead, it leaveth ſome ☽ or ☉, which nevertheleſs before, would have yielded neither, whence it is manifeſt, that the flame excited by the Nitre hath corrected the Metal. NB. That ☿ is firſt to be coagulated, and Chalcitis to be pulverized, before they be commixed with the ſudden fire of Nitre, and enkindled. In theſe Labours, although they may be eſteemed of ſmall moment, a great Miſtery is hidden, which nevertheleſs will be valued by no man, although it ſhould be diſcovered in plain and open words, becauſe the proceſs is mean, coſteth little, and may be performed in the ſpace of a quarter of an hour.

Point XI.

Metals alſo grow up in this ſubject, in the form of Vegetables, before the eye, in the ſpace of two or three hours, to the length of a Finger, or hands breadth, into many branches and twiggs, without Fruit indeed, but is a demonſtration that even Metals themſelves do germinate in it like Vegetables.

THis Point is mentioned only for this end, to ſhew that Nitre hath a power of making Metals to grow after the manner of Vegetables. Which thing the Liquor of Flints alſo performeth, of which mention is made in the Second Part of our Furnaces; but the Liquor of fixed Nitre is better; which is prepared by fixing it with powder of Coals and Flints, which is alſo taught in the Second Part of our Furnaces, ſo that there is no need here to repeat it. If therefore the metals being prepared in little bits, be put into this liquor, they will grow and encreaſe after the manner of Herbs, and ſo quickly, that in a few hours ſpace they will grow to the height of a hands breadth, which is very delightful to the eye, and worthy of a ſingular meditation, whence ſo ſudden an encreaſe ſhould proceed. Certainly many things might be written concerning this matter, but becauſe in this place I have promiſed no more, but to verifie what I have attributed to the ſalt of the earth in my *Miraculum Mundi*; let what is ſaid ſuffice.

Pag 48, Sec Author Part 2. Pag 59.

Point XII.

There is another augmentation or encreaſe of the Perfect Metals, very gainful, by the Imperfect, anſwering to the germination or growth of Vegetables, &c.

AS for this augmentation, it is done by a way far diſtant from the foregoing, *viz.* in this *Sol* and *Luna* are joined with Lead, Tin, and *Venus*, or with Tin alone, where it is to be left for a convenient time, then the Sol attracteth from the Lead or other imperfect metals, a golden Eſſence, is encreaſed and made heavier. The Proceſs is this: Take one lothone (*or half an ounce*) of Gold, eight or ten lothones (*which is four or five ounces*) of Lead, let them be melted together; if you pleaſe, you may add Tin or Copper; put the Crucible, together with the Lead or other imperfect metals, into a ſtrong Crucible, give a temperate and conſtant Fire, that the Lead with the Gold may only flow, but not be white hot; caſt into the Crucible upon it half an ounce of the beſt Nitre, cover the Crucible well, that no Coals fall in, and keep it in a conſtant eaſie fire, then in ſuch a time the Lead, together with the other metals, which were mixed with it, will be turned into Glaſs, but the Gold being pure, is ſeparated ftom the Glaſs by it ſelf, and will adhere to the bottom of the Crucible, which when the Crucible is broken, take out and weigh, and you ſhall find your Gold encreaſed, and that it hath taken weight from the other metals. Although this labour affords no profit, yet it ſheweth how the nature of metals are to be known. There is yet another way of trying this thing, thus, *viz.* Take half an ounce of Gold, join with it 5 or 6 ounces of Lead, and drive away the Lead again upon a good Teſt, till the Gold ſparkle and ſhine, and you ſhall find your Gold to be made much heavier than it was before, which weight it hath drawn from the Lead only.

Point XIII.

By the mediation of this from all Imperfect Metals and Minerals, yielding nothing in the uſual Examen of Cupels, Gold and Silver is produced in a manifold manner, being an Argument that the Imperfect Metals have ſomewhat of the Perfect reconded in them, when they are inverted, and ſhew themſelves to our ſight.

IF we would obtain Gold and Silver from the Imperfect Metals, by the help of Nitre, an equal weight of Regulus of Antimony is to be added to them, that they may be rendred frangible, and fit to be pulverized, ſo that they may be commixed and fixed with Nitre in this manner: Take an ounce, or an ounce and a half of Copper, Lead, Tin, or Chalcitis, melt it with as much Regulus of Antimony; pulverize the mixture, and mix with it its equal weight of the beſt Nitre, put the mixture into a crucible, kindle it with a live coal, then the mixture will be reduced by the Nitre into Scoria, which muſt be melted by a very ſtrong fire, in a Wind Furnace, then the Metal will paſs into a Regulus, but the Regulus will remain in the Scoria, which by the caſting in of a live coal may be precipitated and brought to Regulus again: but weigh the metallick Regulus according to the Hundred weight, and drive it (if it be Lead) upon a Teſt, then you ſhall find it to contain gold and ſilver, which the metal had not before. If the metal be Copper or Chalcitis, a due proportion of Lead is to be added to it, that it may be wrought upon a cupel, then it leaveth gold and ſilver, which without this Operation it would not have done. This Work may alſo be effected by another way, *viz.* Mix ♄ or ☿ with its own weight of Regulus of Antimony, ſuffer it to flow well with the metal in a melting Furnace, inject ſucceſſively by a little at a time, ſo much Nitre as both the Metal and the Regulus did weigh, then let the Regulus and the Metal be fired by the Nitre, that ſome of the ſuperfluous ſulphur may be burnt and the mixture reduced to *Scoria*, afterwards give a ſtrong fire, that the Scoria may be well melted, then the Metal will be ſeparated from the Regulus, which may be teſted, and the correction of the metal, made by the benefit of the Nitre, will be manifeſt.

As for theſe 13 Metallick Labours, they are in themſelves very good, and profitable to be known by every one handling Metals, ſome of which, if they be accurately manag'd, and by a skilful Artiſt, will afford great Gain, and they are all done by the help of the Salt of the Earth. But I will not deny, but that thoſe Labours may alſo be performed by another way, which needeth no Nitre. But I do not now intend to ſay any thing of that, but only to prove that all thoſe Secrets and Tranſmutations may be effectually performed by the contemptible ſalt of the Earth.

In

In Mechanicks.

Point I.

They who Engrave or Etch upon Copper, may of this ſubject prepare a good corroſive Water, by which (the Copper Plates being firſt ſmeared over with a Covering fit to defend them, and what Images or Lines they pleaſe, drawn upon them, with a ſtile or ſtift) by an eaſie and compendious manner, they will be eroded or eaten, which otherwiſe would require a long time to be engraven.

THat a corroſive and graduating *Aqua-fortis* may be prepared of Nitre by deſtillation, needs no proof, the way of making it being every where known, as a thing common, only here it is proved, that this ſhortening of the Engraver's Work may be performed by the Salt of the Earth.

Point II.

Painters by the help of this, may prepare for themſelves moſt excellent Colours, as Ultra-Marine, *blue Smalt, fine red or Scarlet* Lacca, Venice *Ceruſe, and others neceſſary for their Uſes, which otherwiſe they muſt have from far, as* Italy, Holland, France, *&c. and at a dear rate.*

THat excellent colours for Painting, may be made by the ſalt of the Earth, I will thus prove: Blue Smalt is otherwiſe prepared of flowing Sand, Chalcitis, and Potters-aſhes: But if inſtead of thoſe aſhes, you take the fixed ſalt of the Earth, the ſmalt will not be only rendred more open, looſe, and fine, but alſo purer, by reaſon the ſalt of the earth is purer than thoſe aſhes. *Lacca* for the moſt part is made of Flocks ſhorn from crimſon or ſcarlet cloth in the dreſſing, and by a ſingular *lixivium* (inſtead of which Nitre may be taken) the colour is extracted, which is to be precipitated, edulcorated, and dryed upon clean Boards in the ſun, or by a ſtove. Verdigreaſe and Ceruſe are commonly prepared by the help of Vinegar, in Iron Veſſels put in Horſe-dung; but if the Copper or Lead be diſſolved in ſpirit of Nitre, and the Copper precipitated by a *lixivium* of ſalt of Tartar, but the Lead by ſalt water, then edulcorated and dried, the Copper will exhibit a green colour, which may be uſed in all Paintings, and will not corrode and deſtroy other colours, as the common Verdigreaſe is wont to do: And the Ceruſe is rendered more delicate white, and pure than that which is prepared by Vinegar, with which oftentimes much Chalk is mixed to augment it, and is not ſo conducible to Painting, nor to the ſhops, as that which is made *per ſe*, without any mixture.

Point III.

Engravers and Statuaries may ſo harden their Tools, that they may hold their points long, if they be to cut ſtones.

THat Iron may be hardened by Cementation with Salts, ſo that it may ſerve inſtead of Steel, is now openly known; but the iron or ſteel is to be kept in cementation as long as need ſhall be, not with common ſalt alone, but mixed with the powder of coals and ſalt of aſhes; then the Iron grows as hard as ſteel, but ſteel is rendered harder than it was before.

Point IV.

Embroiderers may put any durable Colour they pleaſe upon the Silk with which they work.

IT may be known, that Nitre, as being a depurated ſalt, will eaſily induce colours, and conſtantly preſerve them, yea, exalt them, which many know, they eſpecially who dye cloth with rich grain colours, as Scarlet, Crimſon, *&c.* when they add the ſpirit of Nitre in the boiling, to aluminate it, (as the Dyers call it) the colour is wonderfully exalted, and made much more fiery, ſo that it may be ſold dearer than common Crimſon or Scarlet. This ſpirit of Nitre alſo tingeth Aſhes, Nails, or Hoofs, Quills, or Feathers, with a golden colour, but if the Nitre be fixed by calcination, then it alſo equally exalteth, but not into a red, but a Purple; Dyers uſe Potters aſhes for theſe Works, but fixed Niter is much purer, and rendereth the Work more beautiful than thoſe impure aſhes.

Point V.

They who Paint Glaſs, by an eaſie Work, may thence prepare all Colours or Enamels for Glaſs, ſo that there will be no need to have them from Venice.

THE Painters of Glaſs ſometimes complain, that their fuſory Glaſs or Enamel will not readily flow, and that the Glaſs which they are to colour is melted firſt; the Salt of the Earth being fixed, remedieth this, if the colouring Glaſs be mixed with it in a due proportion, and again melted, for by this means they will be rendered fluxible at pleaſure.

Point VI.

They who work in Wax, by the benefit of this, may whiten it exceedingly, and colour it as they pleaſe.

THat Salts with Water do whiten yellow Wax, being melted thin, and expoſed to the Air, and often ſprinkled with the Salt Water, is ſufficiently known, and wants no proof, but not better than ſalt-Nitre it ſelf.

Point VII.

Printers alſo may add this ſubject to their Ink, which will cauſe it to adhere very firmly to the Paper, and render the Letters very fair.

THat fixed Salts will readily conjoin Ink with Water, is not unknown, and none better than fixed Nitre, which alſo excelleth all ſharp *lixiviums*, having a power of cleanſing Lead, Tin, Copper, or other Veſſels.

Point VIII.

It is convenient for Clock-makers, or Watch-makers, if a Water be deſtilled from it, which ſoldereth Iron or Steel, without fire, if a drop of that Aqua-fortis *be dropped upon it, whence the Iron growing hot, it preſently waxeth ſoft, as if it had been ſoldered in the Fire by the help of Copper.*

IF an *Aqua-fortis* be deſtilled from Niter and calcined Vitriol (NB. that there muſt be no Water or Phlegm in the Spirit) and two little pieces of Iron be melted with it, (between which there muſt be little Filings of Iron) then the Iron groweth hot by the *Aqua-fortis*, which acteth upon it, and the one will be joined to the other by melting, as if it had been done by the Fire. But he that will uſe that water, muſt know how to prepare it himſelf, becauſe ſuch is no where to be found to ſell.

Point IX.

All Smiths may by it harden their Files, and other Iron Tools, as durable, as if they had been made of the hardeſt Steel.

FIxed Salts being mixed with aſhes and powder of coals or ſand, after that they have remained 24 hours in a cloſe Fire, do harden iron like ſteel; as is proved before in the third point.

Point X.

Pewterers may harden their Tin or Pewter, and give to it an elegant whiteneſs, ſo that it will reſemble Silver both in colour and ſound; neither will it eaſily tarniſh, and by reaſon of its hardneſs, will laſt longer than common Pewter.

IF Tin be often melted, and extinguiſhed in a *lixivium* of fixt Nitre, it is made harder than it was before; but if it be put to Nitre in Flux, and ſuffered to melt in it; then alſo it will be more hard. NB. But if the Tin be reduced into Scoria by Nitre, and the Scoria again reduced, it will be rendered harder and fairer, than by the two former ways.

Point XI, XII, XIII.

Cabinet-makers may ſtrike an excellent Black upon Pear-tree, Cherry-tree, Box, Walnut-tree, and other hard Woods, which may be uſed for curious Works inſtead of Ebony. Skinners or Furriers may dye their Ermins, Fox-skins, Wolf-skins, and the like Furs, with a ſcarlet, crimſon, or deep black colour, far exceeding the natural. In like manner Feather-dyers may ſwiftly give any laſting colour to their Plumes.

IF an *Aqua fortis* be deſtilled from Nitre and Vitriol, and a little ſilver diſſolved in it, and Rain water poured thereon (for the weakening of the *Aqua-fortis*) then not only all hard Woods, are blacked by it, ſo that they repreſent Ebony, but alſo skins and feathers are made black as a coal, a ground being firſt laid upon the feathers, skins, or woods, that the Colours may remain and endure firm. Therefore the 11, 12, and 13 points are thus verified together.

Point XIV.

Taylors may take out Spots or Stains, out of Woolen, Linen, or ſilk Garments, and reſtore their Beauty.

OF fixed Nitre is made a Soap, ſo ſubtile and pure, that by it all Spots may be taken out of Garments.

Point XV.

If Shooemakers put old Iron to this ſubject, they may therewith adorn their Leather with an excellent Black.

IF Nitre be diſſolv'd in Vinegar, and old Iron lie ſome time in it, it will make an Ink with which Hides may be blacked with an excellent Black. But there is no need of Nitre for this uſe, for if Iron be put to Aqua Calcis, it effecteth the ſame thing; only mention is made of this in *Miraculum Mundi*, that it might be manifeſt, that this Univerſal Subject may be of uſe, to all and ſingular Artificers.

Point XVI.

Weavers may render their Linen Threds ſo fine and ſoft, that they will emulate ſilk.

ALl Men know that the boiling of Thread in a ſtrong Lixivium renders it ſoft and delicate, but ſeeing that fixed Nitre is better than a ſtrong Lixivium, it will alſo perform this work better than any common Lixivium.

Point XVII.

Dyers by this may give ſo firm and unchangeable a ground, to their Cloth, that the ſuperinduced Colours ſhall not be corrupted, or ſpoiled by any Wine, Vinegar, Urine, Pickles, Air, or Sun.

IF the ſpirit of Nitre be put into the firſt boiling with the Alum and Tartar, for the aluminating the Cloths, it will give a permanent ground, as is already proved in the fourth point.

Point XVIII.

Potters may thence prepare a Glaſſy Colour, not unlike to the Indian Porcellane, *of which Veſſels may be made having the aſpect of Gold, Silver, or Copper, a ſingular Ornament for Noblemens Tables, hitherto unknown to the World.*

THe Glaſing of Earthen Veſſels, that they may appear like a natural Metal, is an egregious art, but it doth not always ſucceed, for the Colours are eaſily burnt and deſtroyed by too much heat, ſo that no Metallick Vitrification can be diſcerned. Veſſels there-

therefore, ought to be glaſed not in a common Potters Furnace, but in a peculiar Furnace, that the fire may be oftner obſerved. If the Vitrification be to repreſent Gold, or Silver, or Copper, then Gold, and Silver, and Copper is alſo to be taken in this manner: Take one part of Gold and Silver, or Copper, Regulus of Antimony two or four parts, melt the Regulus and the Metal, pulveriſe them in an Iron Mortar, and mix them with an equal portion of Nitre, ſuffer the mixture to be fixed in a Crucible, with which mixture the earthen veſſel is to be rubbed over or gilded, afterwards to be committed to a Furnace fit for this purpoſe; if you proceed right, you will obtain a very beautiful Vitrification, as if the Veſſel was gilt with Gold, Silver, or Copper, which will not vaniſh or decay, and will far exceed in beauty and ſplendour the Veſſels which are gilt with thoſe Metals, for thoſe in proceſs of time loſe their ſplendour, but theſe do not as long as the leaſt bit remains.

Point XIX, *and* XX.

Souldiers, Merchants, Travellers, Carriers, Fiſhermen, and others, who are much in the open Air, may of this prepare a Varniſh in which they may dip linen Cloth, which will not permit either Air or Water to paſs through it, with which they may defend their Boots or Cloths, ſo that they may travel dry in the rain. They who make Tapeſtry, may reſtore their faint and faded Colours, ſo that they ſhall be ſtrong and beautiful.

HEre mention is made of a certain mixture in which if Linen Cloth be dipped and dryed will not permit water to paſs through, and it is done in this manner. There is nothing wanting in Linſeed Oyl, but that the humidity be taken from it, which always hindereth its dying; now to effect that, there is no better way, than to boil the Linſeed Oyl gently and gradually with the Flowers of *Lapis Calaminaris* or Saturn, (which are ſublimed by Nitre) ſo long till the Oyl be tenacious, and groweth hard enough for this uſe. NB. That a Linen Cloth immerſed in this mixture, and ſhining Talk being finely laid upon it, may be coloured of any colour, which will very ſtrongly adhere to it, and may ſerve for the making of Tapeſtry. Therefore in this manner the nineteenth and twentieth Points are confirmed.

Point XXI, *and* XXII.

Miſtreſſes of Families, may of it prepare fine Soap or Waſh-balls, far exceeding the Venetian. *Houſhold Maids, may with it ſcour their Metalline Veſſels, ſo as to render them neat and beautiful.*

THat fixed Nitre will waſh and purifie Linen cloth beyond all Soap, no Man will deny, who comprehendeth the matter, concerning which thing, the Ancients have written much, and not in vain, calling Nitre the Soap of the wiſe, but not for the waſhing of Womens Linen, but for the intrinſecal purifying of the imperfect Metals: Their External Purgation may alſo be performed by help thereof, ſo that the twenty ſecond Point is alſo verified.

Point XXIII.

Women may change the Yellow, Pale, or Brown Colour of their Face, and hands, into a beautiful whiteneſs.

THat an Egregious Coſmetick may be made of Nitre, calcined with white Talk (by which ill coloured skins may be whitened) is not to be doubted. For if Nitre fixed by the Regulus of Antimony alone, performeth that, why ſhould it not yet do it better, if it be conjoined with ſome white Mineral Talk in the Calcination?

Point XXIV.

Old Women may by an eaſie way, take away the Wrinkles of their Face and Hands, as alſo the Corns of their Feet, and boil their Linen to ſuch a ſoftneſs, that it ſhall come but little ſhort of Silk.

IT is eaſie to verifie this, to wit if Nitre be fixed with Regulus of Antimony, and ſet in a moiſt Cellar to run into an Oyl, which Liquor will be ſo fiery, that if any hard Skin, or Corn, be often anointed with it, it will ſo ſoften it, that it may be cut away with a Pen-knife, and afterwards other ſmooth and ſoft Skin will grow in its room.

Point XXV.

Gardeners by this ſubject may deſtroy all Inſects, by mixing it with water, and pouring it into thoſe places where they breed, for they will either die in their holes, or run out to die, becauſe they are not able to abide that fire. It alſo ripeneth Fruits, if a little of this Menſtruum be applied to their Roots, at the entrance of the Spring; and if a large quantity of Apples be well covered over with it, they may thence prepare a laſting Wine, Vinegar, or burning Spirit.

IT is not to be doubted, but that fixed Nitre will kill all Worms in the Earth; I have often tried it with good advantage, and found it true, in this manner: Many years ago, I had a Garden, in which was a Bed of Aſparagus, which I covered all over in the Winter with Horſe-dung, to defend it from the Froſt, which occaſioned the breeding of many ſmall Worms like Threads, ſticking to the Roots of the Aſparagus, ſo that they could by no means grow or increaſe, only by reaſon of the great quantity of Worms, which took away the nutriment of the Vegetable for themſelves. And once by chance throwing ſome fixed Nitre expoſed to the Air, and turned into a Liquor, out at a Window into the Garden, it fell upon that place where theſe Worms were, the fixed Nitre was diſſolved by the following Rain, and penetrated the earth; which done, the Worms in great numbers crept out of the earth, becauſe they could not abide that fiery Liquor, the Aſparagus grew up in the ſame place more plentifully and perfectly than before, which moved me alſo to apply this Liquor in other places; by this means the whole Garden was in a very ſhort time freed from Worms.

Point XXVI.

Bakers may uſe it in ſtead of Ferment or Yeaſt, if they diſſolve a few hops therein.

IF pure Nitre with flower be throughly moiſtened with warm water and ſet in a warm place, then, by its own proper power and virtue, it beginneth to ferment, eſpecially if ſome freſh Hops be put to the water, by which alſo other things are promoted to fermentation.

Point XXVII.

Brewers by its help may have very ſtrong Beer, if they extract their Hops therewith.

IN the like manner alſo warm Beer may be excited to fermentation.

Point XXVIII.

Mead, and Metheglin, as alſo Beer, and Canary wine, which are upon the turn, and growing ſowre, may by this be rendred drinkable.

ANy kind of Drink, whether it be Canary, Metheglin, or Beer, which eaſily ſowre in Summer, if you would amend them, to a Tun of the Liquor put about two or three Ounces of fixed Nitre put up in a Linen Rag into the Bung-hole at the top of the Cask, and let it hang down into the Liquor, then in a ſhort time the ſowre Liquor will be rendered drinkable.

Point XXIX.

Comb-makers, and others who work in Horn, may by this ſo ſoften their Horns, that they may imprint upon them what Images they pleaſe.

THat every Horn, or Bone may be ſoftened, if it be ſufficiently boiled in a Lixivium of Nitre, may eaſily be apprehended; which thing another ſtrong Lixivium, not ſo fiery as that of Nitre, will alſo perform.

Point XXX.

Keepers of Armories may preſerve their poliſhed Arms, or Harneſs free from ruſt, by anointing them over with this Subject.

IT is credible, that fixed Nitre will preſerve Iron from Ruſt, ſeeing that it is equally contrary to Corroſives, with a ſimple Aqua-Calcis which performeth the ſame.

Point XXXI.

Bird-catchers, may by the help of this prepare ſuch a Birdlime, as will not be altered by Cold or Heat.

IF a Spirit be diſtill'd from Nitre, and Lapis Calaminaris diſſolved init, and the Spirit again drawn off, there will remain a thick and heavy Oyl, with which the Glue for Wood being throughly humected and diſſolved, it becometh tenacious and viſcous, which will not be dried by the heat of the Sun, but keepeth its unctuoſity in all Seaſons. NB. That Spirit of Salt, or Vitriol, alſo performeth the ſame thing, if any Glue be diſſolved therein.

Point XXXII.

Souldiers may by help of this prepare a fulminating powder from Gold, of which the magnitude of a Pea, put upon a red hot Iron Plate, will give a greater Clap, than half a pound, yea a whole pound of Gun-powder; the ſame may alſo be prepared without Gold, by the addition of Salt of Tartar and Sulphur, as it is deſcribed in the ſecond part of Furnaces.

AS for this point, it needeth no proof; for it is ſufficiently known, that of ☉ diſſolved in Spirit of Nitre (in which alſo was diſſolved Sal Armoniack) and precipitated with Salt of Tartar (or Spirit of Urine, which is better) then edulcorated and dryed, ſuch a powder will be made, which being put upon an Iron, Copper, or Silver Plate, and enkindled by a light heat, fulminateth more ſtrongly than half a pound of common Gun-powder, concerning which, I have treated at large in other of my Writings.

Point XXXIII.

Engineers, and makers of Fire-works, may perform many wonderful things, by the help of this Subject.

THat common Nitre is uſed in the making of Gun-powder, and other Fire-works, wants no Teſtimony, being a thing every where known.

Point XXXIV.

Many new Works belonging to the Weavers, and Smiths Art, may be made thence, which may be Communicated to Neighbouring Countries, in lieu of which, money may be brought into a Country impoveriſhed by War.

AS for this point, it is moſt certain, that by the mentioned Subject, various Manufactures may be perfected, which thing let no Man doubt; but there is no need here to particularize; let it ſuffice that I have verified (by the aſſiſtance of God) thoſe things which I have named, and propoſed to explain in that place.

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Point XXXV.

If Keepers of Vineyards, pour a little of this Subject to the Roots of their Vines, they will have ripe Grapes, and new Wine sooner than the rest of their Neighbours, of which they may make a good advantage.

PLebeians, Country-men, Gardeners, Vine-dressers, and the like, who are conversant about the propagation of Vegetables; do say, and believe, that Dung causeth Fertility, and the increase of things: But a Philosopher, penetrating farther into Nature, and who is a most diligent Searcher of her Works, attributeth that to the Salt which is hidden in the Dung, and the matter it self is no otherwise, for by digestion in the Stomachs of Men and Bruits, the essential Salt, as well of Animals, as of Vegetables, is transmuted into a Nitrous Salt, which together with the Excrements passeth out by the Belly, and is used by Men for the propogating of Vegetables of all kinds, but another Salt which doth not participate with that, is separated by another way, to wit, by Urine, the greatest part of which Salt is acid, and contrary to the growth of all Vegetables, (although it carrieth along with it some volatile Salt) it destroyeth, mortifieth, and taketh away from them the power of growing, yea, Life it self, if they be often moistened with it; but the Nitrous Salt reconded in Excrements, on the contrary, vivifieth all Vegetables, and maketh them to encrease, grow strong, and bear Fruit, which all men know. Therefore if it be probable that it is not the Dung, but the Salt which is hidden in the Dung, that causeth fertility and encrease, it will be possible, that an encrease by such a Salt may be procured in all Vegetables equally as with Dung it self, and indeed better, for there is Urine also conjoined with the Dung; which if it be not for some time exposed to the Air and the Rain, for the washing away that sharp Salt, the Dung would avail nothing to the fattening of the Earth, which Country-men know, and therefore they do not presently use their fresh Dung, but lay it in the Fields before Winter; Vine-dressers in their Vineyards; and leave it there all the Winter, to that end, that the Rain may wash out that sharp and hurtful Salt; and this being done, then at length they mix it with their Earth; and the event teacheth them that this fattens more than Dung carried fresh out of Stables, and full of Urine. Therefore if I know how to make a Nitrous Salt, which is reconded not only in the Excrements of Men and Brutes, but also in Rain-water and common Earth, I may use this instead of Dung, (being first purged from its contrary acid) one pound of which will perform more than an hundred weight of Dung; yet in the mean time it conduceth to that purpose, if a little Sheeps-dung be dissolved together with the purified Nitre, in Water, with which the Roots of the Trees are to be moistened or Seeds throughly wetted with the same. And this I have proved more than once, and found, that by the help of Nitre well depurated, an encrease is most powerfully and swiftly promoted, yea, more than can be believed. NB. That I would have none understand me, as if common Nitre were to be taken, which is not at all profitable in these matters.

Point XXXVI.

Nevertheless Must and Wine may be ripened after another manner in the Hogshead, without this Art, so that they who understand the way may have alwaies good Wine, when others have it sowre, &c.

THis is a very fair and profitable Secret in those places, where Wines, by reason of cold, cannot come to maturity, but are forced to remain crude and impotent, which by this Remedy may be brought to maturity in the Hogshead; so that Wine which is eager and sowre, may be made delicate, friendly, generous, and durable. And although I here write nothing but the truth, and what I have often effectually proved, yet I very well know, that but a very few will apprehend or believe it, which matters little to me; I am satisfied, that I have verified what I have written in this point.

Point XXXVII.

There remains yet another thing very profitable to Country-men. The juice of Apples or Pears being pressed out, by the help of this subject, such an effervescency or working is promoted, as Wine may be thence made, having the relish of the natural, and but little inferiour in durability and strength, &c.

IN this point mention is made how the juice of Apples, and Pears, may be corrected, that it may be like to Wine, keeping many years uncorrupted: which certainly is a Secret of great moment and profit. Apples, when ripe, of their own accord fall from the Trees, every thing hath its period; what advantage may be made by this Art in those places, where a great quantity of Fruit groweth; whether is it not better to make this use of them, than to leave them to rot and be lost? I will do what lies in me, and not bury my Talent, that I may be rendered excusable before GOD and the World, although that which I teach may not be received, as becometh it to be used. At length, after my Decease, it will be observed, what is hidden in my Writings, but the *Phrygians* were wise too late. Therefore I again affirm, that all things contained in this point, are purely true, and may be perfectly effected. [*See Apology against* Farnner.]

Point XXXVIII.

If Husband-men moisten their Seed with this Menstruum, *it will sooner be ripe, and have larger and fatter Grains than ordinary: which being done, I will shew by what means they may make great profit of their Grain,* &c.

THE 35 Point confirms the truth of this, That Grain will grow the more plenteously, if it shall be humected with the Nitrous Water above-mentioned, before it be sown, but common Nitre is not here to be understood. The other is also consentaneous to Truth, which is written about the most profitable use of Grain, which none need doubt; for as yet more may be done in that than I have here spo-

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ken of, for without much labour and coſt, by that water, every good and kernelly ſubſtance, as I may ſo ſpeak, of Grain, is extracted, which Extract may be kept for many years, as a Treaſure of great moment, of which afterwards, at any time or place, (by the addition of Water of Hops) good Beer may be made, and Vinegar, and burning Spirit; it is alſo of ſuch a very Nutritive ſubſtance, that in caſe of neceſſity it may be uſed inſtead of Bread, one pound of which will afford more nouriſhment than two or three pound of Bread made after the common manner. It may alſo be kept in Garriſons with great commodity: Alſo it may be uſed at Sea, by thoſe who ſail to the *Indies*, and trade about in Ships, when they want Bread; of which by the addition of warm water of Hops, may be made very good Beer, at any time of the year, for it is eaſily and wholly diſſolved in warm water. For this reaſon alſo it may be moſt commodiouſly carried from place to place by Armies in time of War, which in the Field, at any time, Winter or Summer, with the water of Hops, it may be boiled into Beer, and there is no need to carry the water far, becauſe it is to be found in all places; neither are Hops of any great burden; therefore in one only Tun there may be carried of this Extract as much as ſufficeth for the brewing of ſix or eight Tun of Beer; and which is more, by this means, wholeſome Beer may be made in the *Dog-daies*, as well in Camps, as in Cities and Ships, without any fear of impediment or future ſowrneſs; at which time good Beer is not otherwiſe made, becauſe then it is wont preſently to grow ſowre; and many other Commodities are procured by this means, all which to declare, would be ſuperfluous. Let what hath been ſaid ſuffice.

Point XXXIX.

I have yet one thing to add among my Wine-Arts, concerning Grain, and the Fruits of Trees and Shrubs, which is to be received with Thankfulneſs, as a great Gift of God to Mankind, viz. *It is found by induſtry and manifold experience, that from Rie, Wheat, Oats, Rice, Millet; alſo from Apples, Pears, Peaches, Cherries, Plumbs, Sloes, Damſcens, Quinces, Figgs; as alſo from Gooſe-berries, Mulberries, Barberries, Black-berries, Elder-berries, and other like Fruits of Trees and Shrubs; from all theſe, I ſay, may be prepared with little labour and coſt, a Drink very like to Wine, both in taſte, ſmell, and ſtrength, being grateful, wholeſome, and durable,* &c.

IN this point mention is made, That of the Fruit of Trees and other Buſhes and Shrubs, a clear Drink may be made, which is alſo grateful and durable, being like to Wine in taſte, colour, and virtue; which thing, although it may ſeem ſtrange to thoſe who are ignorant of the matter, nevertheleſs it is moſt true; ſo that thoſe things which are contained in this point, may be boldly credited. For what ſhould it profit me to write thoſe things which I am not able to prove, it would only turn to my diſgrace and detriment. For this reaſon I have determined to have ſuch a Laboratory prepared, in which not only the owners of Metallick Mines (if they deſire it of me) may learn the manner by me newly invented, for the compendious melting of Minerals, ſo that they ſhall yield more Metal, than by the known and common manner; but will alſo ſhew other Secrets, that the *Magnalia* and wonders of God may be made manifeſt, and We ſtirred up to give Thanks to the Giver of all Good: Which Elaboratory ſhall continue open for one whole year, which being paſt, it ſhall again be ſhut up and ceaſe; for I purpoſe not to render the whole courſe of my Life obnoxious to thoſe great Labours, but at length to enjoy a quiet tranquility; which thing I am willing that all men ſhould know, that they may ſpare me with their Letters, which it is impoſſible for me to anſwer, much leſs that I ſhould ſee the Perſons, ſeeing that the burden of journying is to me altogether inſupportable; but whatſoever I may perform at home, I will not refuſe. [*See for this point Apology againſt* Farnner.]

Here thou haſt, benevolent Reader, a fundamental Explication of my *Miraculum Mundi*, (as for thoſe laſt points, to wit, 36, 37, 38, and 39, they might indeed have been very commodiouſly explained here, but becauſe this is done at large, in a peculiar Treatiſe, entituled, *The Proſperity of Germany*; there is no need to explain them in this place; therefore what the benevolent Reader finds wanting here, there he ſhall find it at large, to which I remit him) whereby it will appear to all men, unleſs to thoſe who are wilfully blind, that I have not aſcribed too much to the Salt of the Earth, as a univerſal ſubject, but that I have proved to the whole World, that every thing which I have attributed to it, is poſſible, and plainly agreeable to Truth. But that theſe Secrets which I have proved, may be performed by the benefit of the Salt of the Earth, may not be done by other waies, and perhaps nearer, I go not about to deny, but do neceſſarily affirm, that the mentioned Metallicks, as well as the Mechanicks, may be performed after other manners. Only here it is verified, That the Salt of the Earth is deſervedly eſteemed a univerſal ſubject, which no man will deny, nor will be able to refute by Arguments, ſupported by truth, how wiſe ſoever he may ſeem to himſelf. Therefore let its vileneſs offend no man, for the beſt of things is oftentimes hidden in things of ſmall price. Wherefore all men erre, who attribute good to outward ſplendor, in which yet it is not, but is only to be ſought, found, and obtained in things vile, and of low eſteem. **Note this, believe this, otherwiſe thou wilt never attain to any Good.**

But here ſome Man may object in this manner: If Nitre be a Univerſal Menſtruum according to my praiſes of it, it will thence neceſſarily follow, that the ſtone of Philoſophers ſhould be made by it, of which nevertheleſs I have here made no mention. To obviate this Objection, I do indeed readily confeſs, that I have not proceeded in this ſubject, any further than thoſe things which I have now proved; but without doubt it containeth in it ſelf greater things, than are manifeſted to me and others. I have made a beginning, I have ſtrowed the way, let others follow me, and proſecute the thing further, if God ſhall grant it to them; as for me I am content with ſmall things, and do not anxiouſly, or ſollicitouſly aſpire after the higheſt. Yet in the mean time, this I freely confeſs, if I were not ſo old as I am, I ſhould not leave this Matter unaſſay'd. It is not to be doubted, but many men have ſought the Univerſal ſtone in Nitre, but what they have found, that themſelves know; and of this I am the more aſſured, becauſe there Matter in the end of the Work taking fire, hath vaniſhed like a Clap of Thunder; hence the ancient Philoſophers have performed their work in Winter, leſt they ſhould be hurt by Corruſcations; it is moſt

true,

true, and void of all errour, that a moſt noble eſſence of this ſort, obtaining a power of expelling all the Natural Diſeaſes of Mortals, and of tranſmuting all the imperfect Metals into Gold cannot be prepared from an impure Metal, or Mineral, nor alſo of Gold it ſelf. Much leſs of viler and more unlikely things in which Fools are miſerably Occupied, prodigally, and unprofitably waſting their Goods; but in my judgment, it ſhould be no other thing than a Concentrated Aſtral fire, exalted by Art, into the form of a ſtone, without any other Adventitious matter. For in the nature of things, no purer Eſſence can be found, than fire, exerciſing a very great power in all things, eſpecially in Metals: For if we had not fire (I pray conſider it) all Arts, and Mechanicks would grow cold, and be involved in the dark ſilence of Ceſſation. Arts were invented, and draw their Original from the fire, otherwiſe how ſhould Metals be got out of their Minerals, and prepared for uſe? truly they would be of no uſe at all. Therefore the fire containeth more than can be believed. He that doth not know fire to be a moſt powerful Element, knoweth nothing, nor without this, can he find out any thing, neither by any juſt right can he aſſume the Name of a Philoſopher. The fire alone, without the addition of other things, is ſufficient to make Metals of ſtones, and particularly, the beſt Metals out of the vileſt ſtones, provided we know how to uſe it; but univerſally, being concentrated into a ſtony matter; which laſt although I have not experienced, nevertheleſs I have obſerved, if (by the favour of the Almighty) a man could exalt the fire into a Corporeal fixed ſubſtance, he would certainly have a Tincture for men, and the imperfect Metals. But ſome man may object, by what way is this Crown to be obtained? Truly by no other than by Divine Revelation. For the Secrets of God of this ſort, are not ſo eaſily to be found out, nor will they be manifeſted to Impious men, although the whole World is infected with a fooliſh madneſs, who doatingly think by force to extort Gold from things in which it is not, and one that hath underſtanding of the fire and Metals, cannot ſufficiently admire thoſe fooliſh and doltiſh Labours, which they who are Captivated by the hunger of Gold, undertake for the making the ſtone of Philoſophers; many being willing to aſcend the Ladder, are preſently ſollicitous about the uppermoſt Round, when notwithſtanding they are as yet far from the lowermoſt ſtep: But this is a matter of a higher and more diligent ſearch. In the fire, I ſay, are contained Secrets of great moment, yea, inſomuch that ſome Philoſophers (among whom *Plato* is the chief) write that God is moſt clearly diſcerned and apprehended in Fire and Salt. Fire, and the Immortal God alone can make light of darkneſs, which is granted to no Mortal to do; without fire is darkneſs and death: Without fire nothing can live, nothing groweth or encreaſeth.

In ſum, Fire is the moſt Noble, and moſt Potent Work of God in the whole Univerſe, he that knoweth how to uſe it rightly, will have need of no Art. Let the Benevolent Reader alſo take with him my ſmall judgment concerning the great ſtone of the wiſe; let every man believe what he will, and is able to comprehend. Such a work is purely the gift of God, and cannot be learned by the moſt acute powers of an humane mind, if it be not aſſiſted by the benign help of a Divine Inſpiration. And of this I aſſure my ſelf, that in thoſe laſt times, God will raiſe up ſome, to whom he will open the Cabinet of Natures Secrets, that they ſhall be able to do wonderful things in the World, to his glory, the which I indeed heartily wiſh to Poſterity, that they may enjoy, and uſe to the Praiſe and Honour of God, *Amen*.

The *EPILOGUE*.

I Doubt not but many Men conſidering the great good that may be effected by the benefit of Nitre, will be deſirous of knowing how they may attain it in great quantity, that ſo they may not be forced to buy it at a dear rate; which certainly would be a great help not to a few who labour in the fire, and I could wiſh from my Soul, that all honeſt and pious Chymiſts might be able to recover ſome compenſation for the Coals they have conſumed without fruit. But ſeeing that I have made mention of the production or preparation of Nitre, in a peculiar Treatiſe entituled, *The Proſperity of* Germany; it is needleſs here to repeat it. But this I will ſay by way of prediction, that Nitre, being throughly known by my Writings, true Alchymy, or the Tranſmutation of the imperfect Metals into better, will in a ſhort time be as common, as it was in *Egypt* long ſince in the time of the Emperour *Diocleſian*, who could not overcome or ſubdue the *Egyptians*, until he had by many Cruelties extorted their Books from them, which he burnt, and ſo brought them under the yoke of ſervitude. NB. That it is no wonder that the Tranſmutation of Metals ſhould have been ſo common with the *Egyptians* only, ſeeing that Nitre is found in all places of the Land of *Egypt*, and the famous River *Nile* is impregnated with Nitre, which only by its overflowing (which it doth twice in a year) ſo fateneth the whole Country, that it is made very rich and fruitful in all things without dung; for the *Nile* aboundeth with Nitre, as the Sea doth with common Salt. For at certain times of the overflowing, *viz.* in the beginning, the inhabitants are wont to dig deep Pits, that they may remain full of the water, which being afterwards dried up by the Sun, Nitre is very Copiouſly prepared, as common Salt is made in *Spain*, and other hot Regions. This therefore I was willing to diſcover for the information of the Reader; if he be wiſe, and God be propitious to him, he will believe that I have ſaid enough; but if not, an Explication ten times clearer will not help him. Therefore let it ſuffice, that what is here deſired, ſhall be had in thoſe Treatiſes which are entituled, *The Proſperity of* Germany, whereby a man filled with the Love of God, will be greatly delighted.

THE

CONTINUATION

OF

Miraculum Mundi.

In which Nature is clearly laid open to the Eyes of the whole World; demonstrating, that the chief Medicine of Vegetables, Animals, and Minerals, may be prepared of Salt-petre, and that Salt-petre truly merits the Name of an Universal Menstruum.

The PREFACE, to the READER.

THis Treatise, *to which I have given the Title of the* Continuation of Miraculum Mundi, *containeth four excellent* Arcanums, *which I doubt not, but will prove very profitable to the publick. The first of these I offer to Country-men, as Husbandmen, Vine-dressers, Gardeners, and all such who are occupied in Tilling and manuring the Earth, that they may learn a new Method of fattening and enriching their Fields and Gardens, without the usual and customary way of dunging, and thence yearly acquire a greater profit.*

The Second, I give to all Citizens, Merchants and others who have time and leasure, and abounding in riches, know not by what means to augment or improve their Gold and Silver. Which way I will shew them, and how to effect it after a much better and honester manner than putting it to Usury, or incommoding or oppressing their Neighbours.

The Third, I present to all Conscientions Physicians that they may learn to prepare Salutiferous and Efficacious Medicines with small charge, little labour, and in a short time; that (as becomes Christians) they may help and succour the Miseries of the sick, and acquire to themselves an honest livelihood.

The Fourth, I dedicate to all persons of great Name and Authority, by the benefit of which, they may preserve their Health entire, and recover it when lost.

The Omnipotent God give us his Divine Grace, that we may make such use of his fatherly bounty, as may tend to the promoting of his Honour, and the Love of our Neighbour. Amen.

Arcanum I.

Being a Gift given to Husbandmen, keepers of Vineyards, Gardeners, &c.

ALthough I had determined with my self to reserve the Press, mentioned in the first part of *The Prosperity of* Germany, (by which the juice might be pressed out of great Trees, the searching after which hath wearied many Mens Brains) for the third part of the same work; nevertheless, it seems good to me to describe it in this Treatise for the good of the publick. And that chiefly for this reason, because the Omnipotent God hath now revealed to me other manners of extracting Salt-petre, in plenty, out of all Wood, and that without a Press; and not only from Wood, but also from all Vegetables, Animals, and Minerals, so that by an easie business, and in a short time, without a Press and putrefaction, Wood, and Salt may be converted into Salt-petre: Yea, in the space of three or four hours, every Vegetable, or Animal, as also Salts of every kind, may be so transmuted, as that they pass into a Fatt, fervid and sulphureous Salt, which afterwards by the benefit of the Air is animated, and converted into Salt-petre. Such a Salt, although it doth not presently conceive flame, and burn like Salt-petre, yet it is now brought to that pass, that in the manuring or dunging of poor and barren ground, it doth the same thing as the dung of any Cattel is wont to effect. Hence by the same Salt every pure Sand destitute of all fatness, is quickly so fatted, that it is rendered fit for the sowing and bringing forth Corn. Few will believe what Salt can perform, when spoiled of its Corrosive force. Therefore Christ saith not in vain to his Disciples,

Ye

Ye are the Salt of the Earth. That Earth which wanteth Salt is dead; nor can it bring forth Fruit: For this inverted Salt ſerveth not only for ſandy and plainly barren Fields, but alſo for thoſe which are fruitful, that they may be ſowed every year, and bring forth Fruit. Truly it is a great Gift of GOD, of which this ungrateful World is not worthy. It often happens, that a Husbandman, through want of Dung, is forced to let his Fields lie unſown, till he can have an opportunity to ſow them; but what a loſs is this to thoſe who in the mean time muſt pay the Magiſtrates, Taxes, or Duties, for them, and yet make no benefit of them. Were it not better for ſuch to poſſeſs only the Third or Fourth part of what they have of ſuch Land as would yield him every year an encreaſe. Certainly by this means, that Land which otherwiſe is ſcarce able to maintain one Country-man, would be ſufficient for the keeping of ten, if it were fatened after this manner by an inverted wood or ſalt. In like manner alſo Vineyards [*and Hopyards*] might be ſo fattened, that the Labour beſtowed upon them might not be in vain, but they might abound in Fruits.

So alſo Fruit-trees, and Meadows, and Paſtures, which bear but little Graſs, may by the ſame Salt be ſo amended, as to bring forth better Fruit and richer Crops of Graſs. But let this ſuffice, concerning thoſe things in this place, more ſhall follow (God willing) in the Third Part of *The Proſperity of* Germany. In the mean time the Plenty of Corn and Wine will be in part conſumed. But I doubt not but that this excellent Gift of God will be ſought into by good Maſters of Families, be had in eſteem, and even from this time to the World's end, be put to uſe for the promoting of the Divine Honour, and the well-being of many Thouſands of men.

Vid. *Proſp. Germ. p.* 3.

But the manner of expreſſing of Wood by its proper Fire, and again of coagulating this acid juice, by the benefit of the fixed Salt remaining in the burnt Coals or Aſhes, into a Salt fattening of barren ground, or of reducing it into *Salt-Petre* by the benefit of the Air, is indeed an excellent and ſingular Artifice, which rendereth all unprofitable Wood highly profitable and beneficial; yea, theſe are Inventions ſo profitable, as the like hath been yet publiſhed by no man. And this Invention is much better than that of reducing Wood into Pot-aſhes, in which all the acid juice paſſing away in ſmoak, wholly periſheth, and is loſt, and from a great quantity of Wood a very few aſhes remain, and out of them there is found but a little Salt (ſcarcely the Tenth Part) fit for the fattening of ground, or to be turned into *Salt-Petre*. For it is not the aſhes, but the ſalt contained in them, that ſerves to both thoſe purpoſes. Therefore this my method of extracting the juice of wood, and converting it into a good ſalt, is far to be preferred to the making of Pot-aſhes of Wood. Nor doth this preſs ſerve only for the preſſing out the juice of Wood, where Wood is plenty, but it may be alſo uſed with great profit in Mooriſh places where Wood is wanting, and which abound with Turf, which may be uſed inſtead of Wood. For the juice of Turf is equally fit with the juice of Wood for enriching of Land; ſo that no Country hath cauſe to complain that the Creator of all things hath not plentifully provided it with ſome part of that *mundane* Treaſure. Countries that lie high abound with Wood, and the low afford abundance of Turf. Therefore, as in Regions of an higher ſcituation, an unſpeakable quantity of Wood periſheth by putrefaction, and growing, and again rotting, ſerveth for no uſe or benefit; ſo alſo it is in places lower ſcituated, with Turf, in which very often vaſt Tracts yield not the leaſt profit to any man, although in their inward Penetrals are hidden great Treaſures. Seeing that it is ſo in Mooriſh and Marſhy places, if they are overgrown with Graſs, and Beaſts ſhould be ſent to feed upon that Graſs, what profit will thence accrue to men? But if they ſhall be invironed with too much wet or plaſhineſs, (too boggy) ſo that they are impaſſible by men, they are of no utility at all.

There are Marſhy tracts which are covered over (or ſwerded only with Moſs) which neither afford Turf, or nouriſhment for Cattel, inaſmuch as the growth of Graſs, and Turf fit for burning, is hindred, either by too much Sand, or large Moſs. And yet thoſe very tracts being preſſed by Fire, yield a fertile juice, by which the neighbouring Fields (eſpecially the Sandy) may be rendered fruitful. For thoſe Moors or Marſhes contain nothing but that fatneſs which the Rain-water hath collected from the neighbouring, high, and ſandy grounds, and waſhed down with it ſelf into the Valleys, where it concreteth into Moſs; whence of right it ſhould be reſtored to thoſe barren ſandy grounds, to fatten them. And by this means it may be brought to paſs, that great fruitfulneſs may be conferred on much deſert and waſte Land, which brings no profit at all to Mankind. What I ſay, is agreeable to the Truth it ſelf, and perhaps in Proceſs of time, will be found moſt true, and come into uſe in very many places. But at this time, theſe things ſeem to Country-men, meer Dreams, and far exceed the Capacity of their maulted Brains. But as every fat Marſh is able to fatten the adjacent, barren, high, ſandy grounds; ſo the Ocean is the Univerſal Medicine, and nutriment of all high and barren Regions, through which it paſſeth, and by the ſalt contained in it, beſtows upon them fruitfulneſs. [*Vid. Nat. Salium.*] Whence the incredible Providence of the Divine Goodneſs manifeſtly appeareth, for which unceſſant Thanks are to be given to the Almighty by all men, for His Fatherly Care, and great benefits never to be forgotten. But how the Sea-ſalt fatteneth, and maketh fruitful ſandy-ground, which is deſtitute of all fatneſs, ſhall afterwards be exactly demonſtrated. Here, by the way, in the Deſcription of my Preſs, for the preſſing of wood, I was willing to mention this thing. How much better therefore is this my Art and Invention of preſerving the juice, and almoſt the whole *pondus* or weight of the wood (the unprofitable Phlegm only excepted) in that tranſmutation, than the invention of reducing it to Pot-aſhes? For any man of Underſtanding may eaſily ſee, That in that open burning of the wood the noble Sulphur is conſumed by the Fire, and can be of no benefit. But if the buſineſs may be ſo ordered, that the wood ſhall burn, and not conſume it ſelf in burning, but be converted into a ſulphureous Salt, it will be a thing of great moment. He that knoweth how to perform this, hath indeed attained the ſcope, and arrived to the deſired end. Although a Coal be deprived of its juice, nevertheleſs it retains almoſt the ſame quantity that the wood had, whereof it was made. One pound of ſuch Coals being burnt, ſcarce yields an ounce and an half of aſhes, which aſhes afford but a third or fourth part of Salt, fit to be changed into *Salt-Petre*, or to fatten the Earth. Therefore it is no ſmall Art to preſerve the Sulphur of the Coals (whoſe Virtues are great) and to convert it into ſo noble a Salt.

For the acid juice of wood being preſſed out, and reduced to ſweetneſs, will effect far more in the manuring and fattening of Fields, than any one can eaſily believe. Hereafter, if I ſhall ſee it neceſſary, I ſhall publiſh yet more and greater things; but I ſhall yet for ſome time ſuſpend the publication of the Third Part of *The Proſperity of* Germany, till I ſee how things will prove; being aſſured that my Writings for time to come will be more grateful, than to this preſent Age. I will now enter upon the deſcription and uſe of the Preſs ſo often mentioned, for the expreſſing and again coagulating the juice of Wood.

Of the Figure, Uſe, and Utility of the Preſs, by whoſe help the Juice is plentifully preſſed out of Wood, without great labour, fit for the making of Salt-Petre.

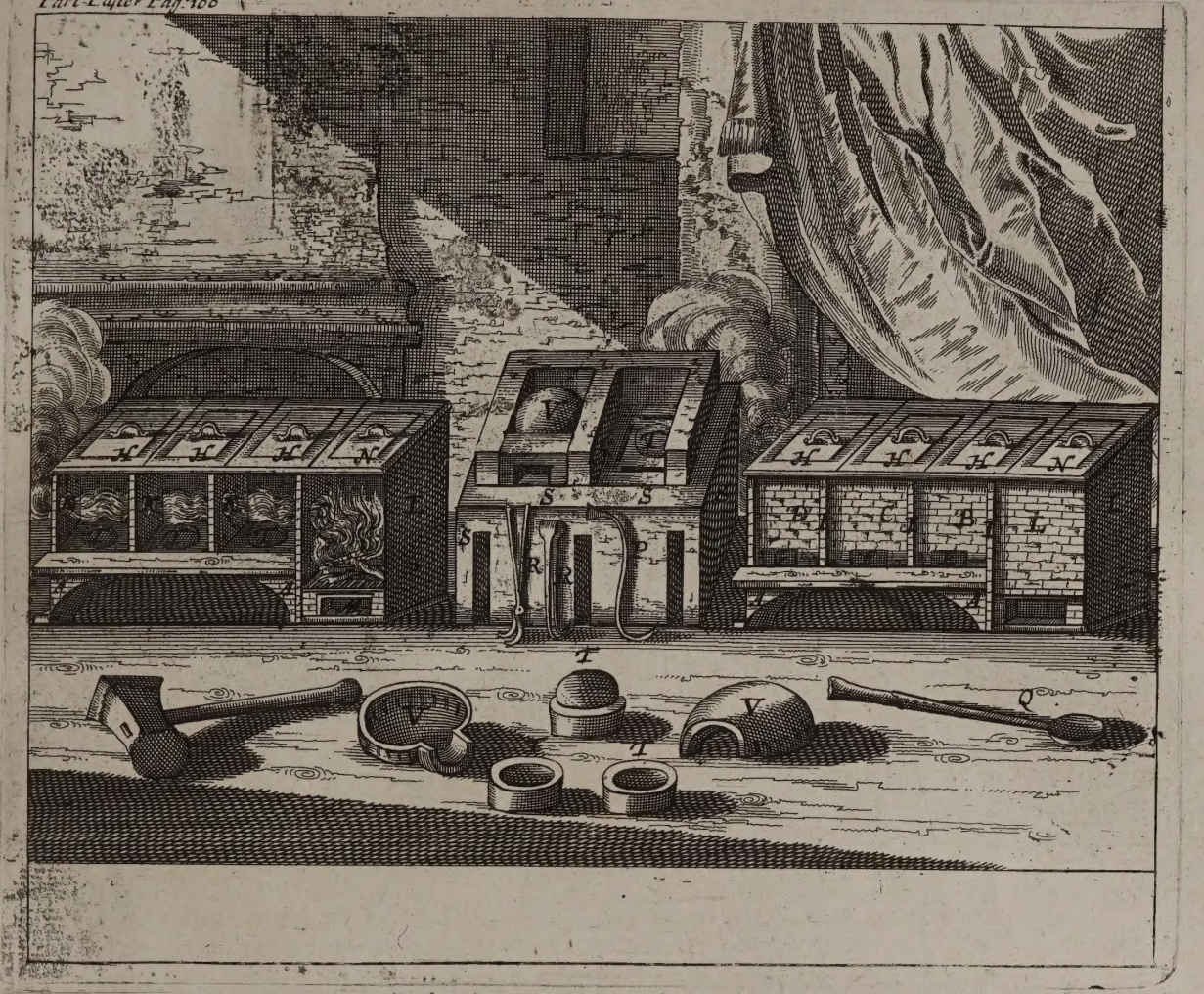
The Form or Figure.

FIrſt, Let a round Furnace be built with Bricks of the ſame form with that in the firſt Figure, noted with the Letter A. It muſt be like a Glaſs-maker's Furnace, large at the bottom, and riſing round by degrees to a ſmall point at the top; in the top muſt be a round hole, opening about a foot broad, by which the Wood may be put into the Furnace. To the hole is to be fitted a Cover or Stopper, made of the ſame matter, with the Bricks, and burnt as they are, to ſhut up the hole. On one ſide of the lower part of the Furnace, is to be a door, by which the Coals may be taken out. On the other ſide is to be a little hole, to which an earthen Channel or Pipe of about three or four cubits long, is to be fitted, in which the ſmoak or fume of the wood, forced out by the fire, may be condenſed into an acid juice, and may deſtil into a wooden Veſſel or Barrel, which is to be fitted to the Pipe, to receive the deſtilling acid juice. See the firſt Figure noted with *pag.* 13. at the beginning of this Treatiſe.

A *is the Furnace or Oven wherein the Wood is char'd.*
B, *The Cover of the Furnace.*
C, *The Door at which the Coals are taken out.*
D, *The Canes or Pipes wherein the ſap or juice of the Wood is condenſed, and from thence runs into the Receiver.*
E *is the Veſſel or Receiver into which the Vinegar of Wood runs.*

All things being prepared in the manner aforeſaid, let the Furnace be filled with wood up to the top, and if the wood be not dry enough, intermix with it, in the putting in from the bottom to the top, ſome dry Shrubs or Buſhes, or ſmall Faggot-ſticks, by whoſe help the wood may be the more eaſily kindled. After the wood is kindled, and burns well, the hole in the top of the Furnace is to be cloſe ſhut with its Stopper, that there may be no exit for the ſmoak, but that it may be forced to deſcend and ſeek its paſſage through the lower hole, by the Channel or Pipe. Therefore when the wood begins to burn, and yet can emit no flame, the heat preſſeth out all the juice, and forceth it into the pipe, in which, from the ſmoak, it is changed into an acid Juice or Liquor, which deſtilleth by the Pipe into the appointed receiving Barrel. All the wood being turned into Coals, and emitting no more fume, the whole Furnace, whereſoever it may admit the air; and alſo the hole to which the Pipe is fitted, is to be ſmeared over with wet aſhes, that the Coals in the Furnace being ſuffocated or choaked, may remain entire. The Coals being taken out, may be put to neceſſary uſes, being equal in goodneſs to other Charcoal which Colliers make in Woods. NB. I would have this underſtood, of ſuch wood as is of a pretty good thickneſs, and ſuffers its ſelf to be reduced into Coals; for if you caſt into the Furnace Buſhes or ſmall Bruſhy wood, to preſs out the juice, you will obtain only a Powder of Coals, which after the juice is preſſed out, is to be left in the Furnace open (not ſmeared over, as we taught above) till it paſs into aſhes, which is required for the coagulating the expreſſed juice; as ſhall appear by and by, when we come to ſpeak of its coagulation. NB. When you have no occaſion for Coals, or cannot ſell them, it is neceſſary, that letting the Furnace be open, you ſuffer them to burn to aſhes. If this operation be inſtituted in a place where there are ſtones fit to make Lime of, it would be worth the while to fill the Furnace with a layer of Wood, and another of Stones, from the bottom to the top, which Chymiſts call *Stratum ſuper Stratum*, and after the juice is preſſed out to open the Furnace, that the wood may be turned into aſhes, by doing of which at the ſame time the ſtones will be calcined, and changed into Lime, which being expoſed to the air, (yet ſo that the Rain cannot come to it) will fall to pieces into a fine powder. To this Powder, being mixed with wood-aſhes, the acid juice is to be poured, which was preſſed out of the wood, that thoſe two contrary natures may mutually work upon each other, and well unite: in which operation the ſharp ſpirit of the wood loſeth its Acrimony, and the fixed Salt of the wood and ſtones is altered, ſo that from both there proceedeth a contrary middle nature, and a ſweeter ſalt; which being long expoſed to the air, draweth from thence a Life, and is tranſmuted into the beſt Salt-Petre. NB. This mixture is ſo to be expoſed to the air, that lying under a Covering or Roof, and being open on the ſides, it may be defended from the Rain, and nevertheleſs attract the air. If it ſhall be dried by the air, it muſt be moiſtened again with the Urine of Men or Beaſts, that it may never be throughly dry. If theſe things be rightly performed, you ſhall have plenty of the beſt Salt-petre, from this matter, in the ſpace of a year and an half, or two years at the moſt; which being extracted, purified, and boiled up, ſhooteth into very pure Cryſtals. The reſt of the matter being again laid in its former place, under the covering or ſhed, and being ordered in the ſame manner, as before, will in the ſpace of two years produce new Salt-Petre, which may be extracted and boiled up as before; for that mixture ſtill remaineth good, provided it be moiſtened with Urine when dry, as was ſaid. NB. He that deſireth to acquire Salt-petre ſooner, after the conjunction of the acid ſpirit with the aſhes, and the precipitation and mortification of both, from that conjoined matter, by the pouring on of water, he may extract and boil up the Salt, and then diſſolve the Salt in Urine, and digeſt it by Circulatory Veſſels; by which means he may obtain the beſt ſalt-petre in the ſpace of one year. This labour of preſſing the juice out of Wood, and at the ſame time of making Stones into Lime, may be uſed in all thoſe Cities and Places where wood and ſtones are plenty. But if this operation were to be inſtituted in a Wood, there would be no need of a Furnace built with ſtone, ſeeing that the Pile of Wood might be covered all over with green Turfs, after the

Part. I. after Pag. 188



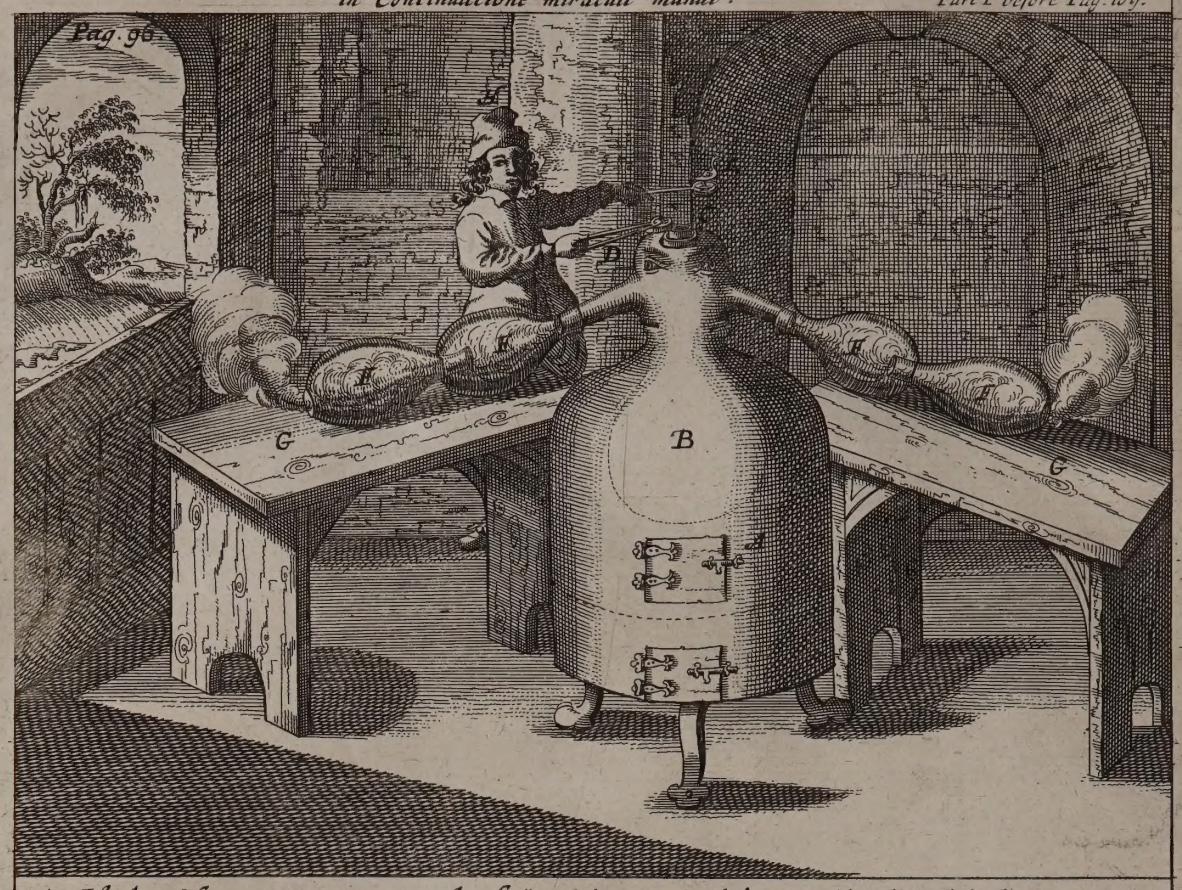
in Continuatione miraculi mundi.

Pag. 13.

A. Ist der Ofen darin das holtz gebresset wirdt.
B. Der deckel darmit der Ofen geschlossen wirdt.
C. Die thur an dem Ofen dardurch man die kohlen aus nimbt.
D. Seind die röhren darinnen sich der holtzsafft Condensirt vnd heraus rint.
E. Ist ein fas darin der holt essig laufft.

Thomas I. Corfield His Book
Oct. 5735

in Continuatione miraculi mundi. Part I. before Pag. 189.



A. Ist der Ofen. B. Das distillier gefäs in dem Ofen. C. Das loch mit einem faltz dardurch das swänge eingetragen wird. D. Die Zange mit deckel darmit das gefäs nach dem eintragen geschlosse wirdt. E. Ein Eisen löffel darmit der schwan eingetragen wirdt. F. die recipienten. G. Die banck darauf die recipienten ligen. H. der Laborant.

in Continuatione miraculi mundi

A. Ist der Ofen wie er in der arbeit stehet. B. Ist der Vnterstetheil des Ofens wie er offen ohne die vorder wand anzu sehen. C. Ist das obertheil des Ofens D. Der rost in dem Ofen. E. der Herd. F. der Müffel so auff den herd gehöret. G. der Deckel darmit der Ofen oben gedecket wird wann kohlen darin sein vnd in voller arbeit stehet. H. das rauch fanglein an dem Ofen.

the ſame manner which Colliers uſe in making their Charcoal, only with this difference, that here muſt be a hole in the ſide, to which the duct or pipe is to be adjoined. The juice being preſſed out, the pile or ſtack is to be every where well cloſed, that the Air may have no paſſage, if you would preſerve the Coals. All being cooled, the Coals may be taken out and ſold, or put to neceſſary uſes, ſo that the expreſſed juice, which being received in no Veſſel, would have vaniſhed in ſmoke, plainly coſts nothing; but if you do not deſire Coals, let them be burnt into aſhes, that they may ſerve for the coagulating the ſpirit into ſalt, and afterwards by the help of the air, in a certain ſpace of time tranſmute it into good Salt-Petre.

NB. It is here alſo to be noted, that the expreſſed juice carries along with it a ſharp hot Oyl of a dark reddiſh colour, which is not to be caſt away, but is to be poured upon the Aſhes together with the acid Spirit, that putrefying with the Salts, it may with the reſt put on the nature of Salt-petre. But he that will may apply the ſame to other uſes; foraſmuch as it is profitable for other things. Any Wood expoſed to the Rain, or ſtanding in the Water, eaſily rotting, being anointed with this Oyl, will be preſerved, ſo that it will not ſo eaſily rot, ſeeing that the water cannot adhere to the Wood, but is forced to ſlide off, or is hindered from penetrating the Wood. Carters, or Waggoners may uſe the ſame inſtead of Greaſe to their Wheels and Axle-trees, eſpecially when it is a little thickened with Suet or Roſin. But the beſt uſe of it that I yet know (if you except Salt-petre) is to diſſolve and boil it with a ſharp Lixivium made of Lime and Aſhes, by which it becometh a very hot and penetrant Soap, procuring fertility; if a poor ſandy ground be ſprinkled with the ſame and moiſtened: For it rendereth it very fruitful; which thing it doth not only in Fields, but alſo in Trees and Vines, inſomuch, that one Tun of it avails more in the fatening of Fields, than ten Cart Loads of Horſe-dung or Cow-dung: And a Hogſhead, or Tun of this Soap may be carried into Fields and Vineyards, far remote, more eaſily than ten Loads of Dung, which is carried to Vineyards ſituate in Rocky places with great labour, and no ſmall charge.

NB. If this Soap be uſed for the fattening of Vines, too much of it is not to be uſed at a time, leaſt the Vines grow too fat and luxuriant; therefore its moderate uſe is required, which needs not that exactneſs in the dunging of Arable Land: Although in that an exceſs brings damage, and indeed it is the exceſs of good things that doth harm. A Tree, or Vine being made too fat by dunging, grows luxuriant, and putteth forth more fruit than it can bear and bring to Maturity. The Wood it ſelf becomes too fat and ſoft, ſo that in the Winter it is eaſily injured by the cold. Whence in all things a Mediocrity ought to be obſerved. This Black Soap made of the Oyl of Wood, is truly a very great gift of God, in thoſe places where Sand renders the ground barren. Hence the admirable Wiſdom of our Creator appeareth, as it were thus ſpeaking to us: *Ye rude, and unskilful men, wherefore do you leave this place uncultivated? Becauſe you cannot ſow it with any kind of Grain, I will that it ſhall produce wood, and afford you a matter, with which, if you will, you may render it fat.* For it is ſufficiently known, that Animals, and Vegetables rotting, dung the earth, and render it fat; which thing even the Ruſticks have now learned, that they do the ſame without putrefying or rotting, when they cut down, and burn the Trees and Buſhes, which had grown up in the Fields, during the long time of the War, and ſpread the Aſhes on the ground, by which it is fatned. But that they know not how to ſave, invert, and uſe with the Aſhes for dunging, the acid Spirit, and hot Oyl, which vaniſh in the burning, ought to ſeem ſtrange to none, ſeeing that no man hath hitherto declared it to them. Nevertheleſs, I perſwade my ſelf that this way of dunging of Land, will come into uſe, in proceſs of time, but I believe not quickly [here in *Germany*] by reaſon of that great quantity of grain which every place affordeth in this time of Peace. But if hereafter, a new War ſhould happen (which God avert) and the Fields ſhould lie many years untilled, through the want of Men, Horſes, and other neceſſaries, then I believe, and not before, this neceſſary Art will be ſought after.

But what other things the ſaid juice of Wood is able to effect, we cannot here declare, by reaſon of our intended brevity: Yet this I will add, that if this acid Spirit be rectified, it may be uſed in the preparation of good Medicines, in Mechanick Arts, in the making of many fair Colours, from the extraction of Metals, Minerals, and Stones, and for all things for which common Vinegar is uſed; yea, far more commodiouſly, becauſe it much exceedeth the common Wine, and Beer Vinegar in ſharpneſs. And even it ſelf alone is a Medicine which cureth many incurable Diſeaſes; being mixed with warm water, and uſed in a Bath for waſhing the Body, is far more efficacious than thoſe Baths which iſſue out of the Earth; eſpecially in all Scabs, in Members relaxed by the *French* Palſie, *Paralyſis Gallica* [I ſuppoſe he means the Venereal Lues] in Fiſtulous and ſtinking Ulcers in the Legs and other parts of the Body. Alſo in the Gout, Stone, Cramp, Sciatica, Palſie, Diſeaſes of the Womb, and all ſorts of ſickneſs otherwiſe to be cured by the help of Baths, which this Vinegar preſſed out of Wood, far exceedeth in Salubrious Vertues.

The ſame alſo doth the hot Oyl which is expelled by expreſſion with the Spirit, which exerteth wonderful Virtues in curing thoſe Ulcers and external affects. For which certainly, as a great gift, and to be eaſily found in all places, none of thoſe who are burdened with grievous Diſeaſes, can render ſufficient thanks to the Almighty: But eſpecially the Poor, who have not Money to buy Phyſick.

NB. Here alſo it ought to be obſerved, that thoſe who uſe the Bath tempered with the juice of Wood, ſhould before they enter into it drink ſome ſpoonfuls of this Vinegar. For this Vinegar by penetrating the whole Body, caſteth out all things ſuperfluous and noxious to nature by ſweat, and openeth all Obſtructions of the Liver, Spleen, and Lungs: And eſpecially when the Vinegar is elicited from a Wood, or Herb, which is endowed with peculiar Virtues for the eradicating of thoſe Diſeaſes. As for Example: The acid Spirit of the Vine, Beech, Birch, and the like, taketh away the Obſtructions of the Internal Bowels. That of the Oak, and other hard Woods, cureth the Corruption of the Blood, and all Diſeaſes proceeding thence, as the Pox, Leproſie, external Ulcers of all ſorts, Scabs, Fiſtula, and all open Sores. Alſo all Contractures or Cramps, Falling-ſickneſs, Apoplexy, and Palſie. So the Vinegar of Aſh, Cherry-tree, Plumb-tree, Sloe, or Bullace-tree, Medlar-tree, Arbute-tree, and the like Trees, which bear Fruits having Stones or Kernels, cure the Gout, and the Stone of the Reins and Bladder. That of Balſamick

Herbs, as St. *John*'s Wort, Sage, *Paul*'s Betony, or Fleuellin, Sanicle, Betony, Lung-wort, Liver-wort, Saxifrage, and other like, taketh away the internal Hurts of the Liver and Lungs, and all inward affects arising from Blows, Falls, *&c.* So efficacious a Medicine is this juice of Wood, that the most costly Galenical Compositions are forced to give it place. In making the Bath one Pound of the acid Spirit is to be added to ten pints of water, and this quantity to be augmented, or diminished, according to the condition of the Patient and the Disease.

Before the use of the Bath, some drops of the Oyl may be adjoined to the spoonfulls of Spirit, which so fortifieth the Spirit, that it more readily penetrateth the body, more forcibly accosteth the Disease, and the sooner expelleth it. In Gouty Pains, and in the stone of the Kidneys, the same Oyl being rubbed upon the part with the Spirit, gives a relief not to be contemned. In brief, this juice of Woods and Herbs, if it be duly prepared and used, is able to shame and confound all the Apothecaries Shops of Galenical Medicines, notwithstanding their proud Furniture of Painted and Gilded Glasses and Boxes.

And I do not doubt but in process of time, that Physicians out of a good Conscience, will explode those unprofitable Coctions, and in their room institute better preparations, that God may have his due praise, and the miseries of the sick receive succour.

For although this acid water doth not contain the Virtues of the whole Herb, nevertheless it is to be reputed and used as an efficacious water of Herbs, in Medicine, seeing that that which is used in the Shops hath very little virtue, as daily experience witnesseth: It being nothing but the pure Phlegm of the Herb, the chief Virtues and Essence of the Herb remaining in the supposed fœces, although the water hath carried along with it something of the Smell and Taste. Look upon any dry Herb, which the heat of the Sun or Air hath deprived of all its Phlegm and Humidity, and see whether it be also deprived of its Smell, Taste, and Efficacy. And although in length of time it will lose all its Taste and Smell, nevertheless its chief Virtues yet lie hid in it. Yea, although its *acetum* be drawn from it by distillation, that an unskilful man would think that there remained no virtue at all in the remaining black Coals of Wood or Herbs, yet the most efficacious Virtues yet lie hid in the best Sulphur and Salt. And that great Virtue doth yet remain in the Coals, is not unknown to Rusticks, who in the Winter burn them to warm themselves, and boil their food, which thing they could never do by the Phlegm separated by distillation. Those black and contemptible Coals are of so great vertue, that they emulate the powers and properties of the most Noble Creature the Sun, for which cause they merit the name of Terrestrial Suns. For whatsoever the Astral and Sydereal Sun effecteth in the superiour Firmament, the same doth the Terrestrial Suns, *viz.* Coals, which are its Vicars, also effect. The superiour rendereth all things partakers of Life and Growth, the same doth also the inferiour Suns. In the Winter time when the Sun is far distant from us, all the Vegetables of the Earth are as it were dead: In the Spring upon his return, all things revive, grow, move, increase, and are nourished.

Insects themselves which have hid themselves in Holes and Caverns of the Earth to fly from Cold, and have lain as dead, do again come forth into the light. All which effects are produced by the superiour Sun. The same things also the inferiour Sun can effect. For when Flies, Spiders, and other like Insects in any Parlour or Chamber, to shun the cold, betake themselves to Holes and Chinks, and there lie as it were dead; the first heat they perceive by the making of a fire in that room, recover their former life, and again creep out of their hiding places, as upon the Suns approaching us in the Spring. Yea, if in such a Room made hot, there had been before reposited great Insects, as Frogs, Snakes, Lizards, and the like, as also Herbs killed by the cold, they would revive, recover strength and grow equally as if they had been illustrated by the Rays of the great Elementary Sun. Therefore if this Contemptible Coal, which in the judgment of the unskilful is deprived of all its Juice and Virtue, can perform these things; what a Medicine think you may be prepared by the help of Art of such a Coal?

But some Putatious Physician may here ask; who can prepare any Medicine from so dry and insipid a Coal? It can neither be dissolved by the strongest Corrosive Liquor, nor by the most intense fire, if no air come to it: of which, if the least Portion shall touch it, it presently conceiveth flame, and is consumed, so that nothing of it remains but a few ashes mixt with a little Salt. And those Virtues which refresh all things living, and revive the dead, all perish by Combustion, and vanish in smoak, which could they be taken and preserved, might doubtless afford a Medicine of great moment. To this I answer: wherefore cannot so great an efficacy be preserved, and used for the making of a good Medicine, before that it vanisheth by burning, and flieth into the air? Whatsoever Philosopher is ignorant of the manner of effecting this, truly he is a weak Philosopher, who ought to blush in that he setteth himself before others, and contemneth them who exceed himself in Learning and Science. He that knoweth not how to use any palpable and coagulated matter, before it be consumed by burning, and vanisheth away, by what means will he elicit the same out of its Chaos, and concentrate it? But that the way of freeing this Noble Sulphur from its Bonds and Keepers, is not known to every one, is no wonder. For it will not come at every call. Of all the Philosophers, there is none who more clearly and openly teacheth by what means it may be delivered from its Bonds, than *Sandivogius*, who expresly saith, *That this Sulphur lies hid and is held Captive in an obscure or dark prison, and kept by very strong keepers. But that Salt only in the conflict or fight, gave him a deadly wound.* No Man hath spoken more clearly than this worthy Author. Therefore he that knoweth not how to extricate that Vital virtue from its bonds, and how to use it in Medicine, let him read the above cited *Sandivogius*, who will clearly instruct him. If he cannot learn of him, there is no reason why any one should labour to help him.

I will propose the matter by a similitude; a Man is compounded of three things, *viz.* Body, Soul, and Spirit; The *Body* is visible, immoveable, gross, earthy, and corruptible: The *Spirit* is invisible, movable, living, and nevertheless mortal; But the *Soul* of Man, which is his most noble part, is immortal.

In like manner, there is also a certain *Anima* or Vital Principle in Vegetables and Minerals, although there are few who know how to extract it. Therefore as in Man the Soul is the most noble part; to which the Spirit is inferiour, and the Body the lowest or vilest; so it is also with Vegetables and Minerals. To acquire the *Anima* or Vital Principle of any Vegetable or Mineral, that fixed and constant *Anima* is to be

be ſeparated by the help of Art, from the groſs, unprofitable, and dead body. For as long as the groſs body adhereth to this noble Principle, ſo long it cannot move it ſelf in a due manner, nor demonſtrate its nobility, but is held Captive by its groſs body, till it be ſet at liberty, by ſome body who knows how to diſſolve its bonds. Being freed from its bonds, and the groſs body laid aſide, it can preſently exert its power. Therefore let this be the principal care of Phyſicians, that inſtead of a body dead, and deſtitute of Virtue, they labour to attain the fixed and living *Anima* of Vegetables, that uſing that in the cure of diſeaſes they may perform far greater things than now they do.

I have here inſerted this diſcourſe, only for this cauſe, that I might ſhew that a whole or intire body is of very little moment, and that that thing whereby any Good is to be effected in Medicine, is to be found only in the moſt noble part, to wit, the *Anima*.

And even, as in Minerals, beſides a fixed and incombuſtible Sulphur, there is alſo found another, combuſtible and fugacious: ſo alſo there is found a twofold Sulphur in Vegetables, in the deſtilling of which, by a Retort, an Oil is expelled, together with the acid Spirit and Phlegm, which indeed hath its virtues, but can in no wiſe perform thoſe things which that part remaining in the black Coals is wont to effect. For by how much a Medicine ſhall be more fixed and conſtant, by ſo much the more do they enter and encounter long and fixed diſeaſes; ſo on the contrary, fugacious medicines are found leſs efficacious in eradicating the ſame.

What I have ſaid concerning Vegetables, *viz.* That there is in them a volatile and fugacious ſpirit, and a conſtant fixed *Anima*; the ſame is alſo to be underſtood of Minerals, which beſides a combuſtible Sulphur, poſſeſs alſo a fixed and conſtant *Anima*.

But whoſoever knoweth how to conjoin the *Anima* of Vegetables with the *Anima* of Minerals, hath obtained a Medicine which is able, after a wonderful manner, to corroborate the Vital Spirit in Man. For the *Animæ* of Vegetables and Minerals, are the Rays of the Sun coagulated, which neceſſarily contain a vivifying or enlivening power, ſeeing that the ſun maketh all things partakers of Life.

And a man, if he only beholds the ſun, or its Vicar the fire, the earthly ſun, although he be in ſome very deep and cold place under ground, where he cannot feel its warming and enlivening power; yet he ſhall perceive his Heart to be recreated and ſtrengthened by the bare aſpect of it: But how much greater a recreation and corroboration would he perceive, if he ſhould take the *Anima* of Wine, or of ſome other Herb conjoined with the *Animæ* of Gold, for the curing of his body, with both which it hath a great familiarity; for like rejoiceth in like, and deſireth to be joined to it: And therefore it ought to ſeem ſtrange to no man, that I aſſert, the *humidum radicale* of the humane body may be augmented by the *Animæ* of Vegetables and of Gold: For the *Anima* of Vegetables is nothing elſe but an eſſential univerſal ſalt, which is found in all things.

Seeing therefore that Philoſophers confeſs, that the redneſs of gold and whiteneſs of ſilver may be encreaſed by its own univerſal ſalt, it is reaſonable for us to acquieſs in the ſame opinion, and to maintain it againſt thoſe that erre. A viſible and palpable demonſtration is to be credited. Nevertheleſs I eaſily perſwade my ſelf, that this diſcourſe of mine will not be credited by many, which I cannot help. It contenteth me, that I have written the Truth, and lighted a Candle to my Neighbour.

After one and the ſame manner, of Wood of little or no worth, I have ſhewed the making of *Salt-petre*, for *Souldiers*, *Gardeners*, *Vintners*, and *Husbandmen*, fit for the dunging of Orchards, Vineyards, Fields, and Meadows; of commodious Baths, for the Sick; of a good Vinegar for Chymiſts and Apothecaries, neceſſary for many extractions. It now remains, that I alſo offer a Gift to the Owners of Metallick Mines. If they ſhall humect or moiſten the *Calx viva*, or Lime made of ſtones, in the Preſs, as we have taught, with the *Acetum* or Vinegar of Wood, they ſhall obtain a cheap Flux, by which thoſe hard and untractable ſtones digged out of metallick Veins, may eaſily be melted; for the acid ſpirit of Wood is fixed by the Lime, and converted into a ſalt, cauſing an eaſie Flux. Nevertheleſs, this ſalt will be of greater profit to Husband-men, for the dunging and fattening their Fields (for whoſe ſake I alſo deſcribe it) than in the melting of Mineral bodies. Phyſicians may uſe the noble and efficacious juice of Wood, for the happy cure of many incurable diſeaſes, and to their own honour and profit. This Vinegar of Wood being expoſed in Hogſheads to the cold in Winter, that it may be frozen to Ice, the Phlegm only freezeth, but the ſharp ſpirit, with the Oil, is not turned into Ice, but remaineth in the middle of the Hogſhead ſo ſharp, that it corrodeth metals like *Aqua-fortis*. If Princes and Great men would be pleaſed to take care that the Wood in their Dominions (otherwiſe rotting in the Woods) might be turned into *Salt-Petre*, they would do well, and it would not repent them of their labour, ſeeing there is a time at hand, in which *Salt-Petre* will be much wanted.

There is yet another ſecret, which for the ſake of Country-men I ought to diſcover, which will yield them no ſmall profit; which is this: If Hop-poles be burnt at the ends which are to go into the Earth, and thoſe burnt ends dipt in the Oil of Wood, that they may imbibe or ſuck in that fatneſs, and afterwards ſet into the earth, they admit no humidity or moiſture, which otherwiſe they are wont to do, being every year diminiſhed in that part which ſtandeth in the earth. It alſo cometh to paſs, that they communicate their fatneſs to the vines and ſtalks of the Hops to which they are joined, and render them more fat and fruitful, by this means affording a twofold profit, firſt in preſerving the Hop-poles from rotting a longer time than they are wont to laſt. The other is, That the Roots of the Vines and Hops, drawing fatneſs and nouriſhment from the bottoms of the poles grow the faſter, and are more fruitful. Moreover, thoſe ends of the poles, in length of time growing rotten, yet there is no loſs of the Oil, but ſtill the ſame profit remaineth, ſeeing that thoſe rotten ends of the poles being taken up and planted again in the earth with the Roots of Hops, they will afford them nouriſhment for ſome years, better than if they had been dunged with dung. In like manner, by the help of this Oil of Wood, ſtrong and durable quick-hedges may be made for the fencing in of Vineyards, Orchards, Gardens, and Hop-yards, by which Beaſts and Thieves may be kept out. For this purpoſe the ſharp end of the ſtakes fit for the Hedges, are to be put into the Fire till they grow black, and then whilſt they are hot, be dipped into the Oil, that they may well imbibe the ſame.

With theſe, being drove into the ground after the uſual manner, an Hedge may be made by planting a young ſhoot or ſet of Thorn, Crab-tree, *&c.* all along between the Stakes. Thoſe ſets or ſprigs, which

otherwiſe, growing but ſlowly, are many years before they come to a requiſite height and thickneſs, their roots now obtaining fatneſs and nouriſhment from this Oil, arrive to maturity in leſs than half the uſual time, and become a thick and ſtrong Quick-hedge before the Stakes are rotten. Moreover, there is no danger of wild Beaſts coming into thoſe places where the Hedge ſtakes are imbrewed with this Oil, ſeeing that wild Beaſts ſhun all ſtrong odours, and dare not approach them. If you ſhall imbibe Hempen-Cords, or ſuch as are made of the Bark of Trees twiſted together with Graſs, with the ſaid Oil, and then bind them about Fruit-trees, it will hinder the creeping up of Spiders, Ants, or Piſmires, Palmer or Canker-Worms, and other the like Inſects, which are wont to damnifie Fruit; inaſmuch as thoſe Inſects plainly abhor ſuch hot Oils. *By this means alſo may Rats and Mice be hindered from creeping up Hovel-poſts, and devouring the Grain.*

There is yet another manner of promoting the dunging of Fields, and the happy growth of Seeds, and not only thoſe Fields which are lean and ſandy, to which Cow-dung may be uſed, but alſo thoſe which are hard and craggy, in which neither ſand nor any duſt of Earth is found.

But in making manifeſt this Artifice to the whole World, my intention is not that the World ſhould thereby be inriched with great profit, as I have endeavoured by deſcribing the manner of Dunging poor Sandy Land, by the acid juice of Wood. My Scope or end is only this, That every man may ſee and conſider how many wonderful things may be effected with wood and ſhrubs, which are every where found in great quantity, and nevertheleſs are of no uſe or profit.

Who would credit any man, affirming, that it might be effected, that not only Grain, but all ſorts of Trees, and excellent Vines ſhould grow in any hard and naked Rock, without the addition of any Earth or Dung? Truly, I believe that there is no man in the World, to whom this will ſeem likely. This will more amaze *Farmner*, with his whole Crew, than my *Miraculum Mundi* did. Yet becauſe the thing may be done, I cannot forbear to divulge the Artifice, only to this end, that I may ſubject the Divine Wonders to the eyes of the blinded World. But yet it cannot be, but that it will be profitable in many places, in thoſe eſpecially which lie near Rivers, and afford Wine; ſuch are thoſe which lie upon the *Mœne*, *Moſell*, *Necker*, *Rhine*, *Danube*, and other the like Rivers, where great and craggy Mountains frequently occurr; in which having the heat of the Sun all the day, Vines might be commodiouſly planted, if Earth and Dung could be carried thither. Certainly Vines grow no where better than in Rocks and Craggs, into whoſe clefts and cracks they inſinuate their roots, that they may thence attract to themſelves nouriſhment, which few other Plants are wont to do: And becauſe for the moſt part much Wood grows about ſuch Rocks, it would be worth while to preſs out its juice, by which the hard Rocks might be reduced into a ſoft Duſt, fit for the Reception of Vines, which might be performed by this operation; which nevertheleſs would not be neceſſary to undertake, but for the manifeſting of the wonders of God to the unskilful, and ſhewing that ſuch things may be done. If any deſireth to plant in a place of this ſort, in which Vines or Trees growing freely in rocky and ſtony places, as Cherry-trees, Plumb-trees, Service-trees, and others, bearing Fruits which have Stones; at the beginning, a little hole is to be cut in the Rock by the help of Maſons Tools, which is to be filled with the Vinegar of Wood; which being done, the hole is to be covered to keep off the Rain. After ſome daies, let him ſee whether the Vinegar hath inſinuated it ſelf into the Rock, and again fill up the hole with freſh Vinegar, and cover it with a Stone, as before. And this Labour is to be repeated in the Summer time ſo often, till the Rock hath drunk up much Vinegar, and be thereby ſo ſoftned for the ſpace of an Ell in length, breadth, and depth, that it may be eaſily dug up with a ſharp Inſtrument, and become a great hole; the matter digged out is again to be caſt into the hole, and to be again filled with the Vinegar of Wood, and covered with ſtones, and ſo left till all the matter grows ſo ſoft, that it may be crumbled to pieces with the fingers. And in the *Autumn*, when Trees have loſt their Leaves, or in the *Spring*, before the Leaves come forth, *viz.* in the Month of *March*, Vines or Trees are to be planted in the matter contained in the hole, and the matter to be trampled cloſe down about their Roots, then all to be wetted by the pouring on of Water, and the event to be committed to God. So the Vines or Trees grow as well as if they had been planted in other manured ground. The reaſon is this; Becauſe the Rocks conſiſting not of Sand, but of ſtones, fit for the making of Lime, do contain much *Salt-Petre*, as alſo the acid juice of Wood, partaketh of the ſame nature, this, by corroding the Rock, diſſolveth the *Salt-Petre* in the ſtone, and ſetteth it free, and at the ſame time loſeth its own corroſive Acrimony, ſo that it cannot hurt the Roots of Vegetables, but is like to Cow-dung or rather better, for it fatteneth and nouriſheth the Roots better. Therefore a Tree or Vine planted after this manner in a Rock, if it ſhall once put forth, afterwards dieth not, but the Roots inſinuating themſelves into the Clefts of the Rock, ſeek their own nouriſhment. Nevertheleſs every Winter when the Leaves are fallen off, ſome of that acid juice is to be poured to the Trunk of the Tree or Vine, that during the Winter, it may again ſoften ſome Portion of the ſtone, which will afford new matter of nouriſhment to the Roots. And by thus affuſing of freſh juice every year, there will be no need of Earth or Dung, ſeeing that the Stone is changed into earth and dung by the juice of the wood.

Although this *Arcanum* will ſeem a thing impoſſible to many, yet it is moſt true, of which, if any will make trial, he may eaſily do it in this manner: Let him get a ſtone which doth not conſiſt of ſand, but of ſuch of which Lime is made, which being expoſed to the Sun, let him pour upon it the acid Liquor of Wood; which when the ſtone ſhall have well imbibed or drank in, let him pour on more, and repeat this labour ſo often, till the ſtone be rendered ſo ſoft, as it may be rubbed to powder between the fingers. In this matter, rubbed or ground ſmall, let him ſow any Seed, which will ſprout forth thence, as if it had been ſowed in any good earth: The reaſon we have already declared, *viz.* becauſe the ſtone is converted into earth, having its own *Salt-Petre*, or proper Dung in it ſelf, and moreover, changing the juice of wood into *Salt-Petre*. He who rightly underſtandeth and followeth my Doctrine, and ſhall ſet about the Work with diligence, will with-

without doubt attain his end. But if he tries with a Sandy ſtone, he will effect nothing. For ſtones of this ſort want a nouriſhing Salt, and they wholly refuſe ſolution by the Liquor of Wood, ſo far are they from imbibing, coagulating, and changing it into a Dung y Salt. But after the following manner any one may prove, that natural Salt-Petre may be made of the ſtones of which Lime is made, and the juice of Wood. Let him take ſome pieces of this ſort of Lime-ſtone, not yet burnt (for when burnt, it is much more facile, as I have taught) and immerge or dip them all over in the Vinegar of Wood, and dry them in the heat of the Sun, or ſome other warm place, and let him repeat this labour ſo often until they be ſo ſoft that they may be rubbed or ground to pieces like Earth. From this ground matter extract the Salt with Rain-water, which will be plainly like to Salt-Petre. So of the Stone is made Earth; of the Salt of that Stone, and the Vinegar of Wood, Salt-Petre; or a ſalt equally ſerving with the Dung of Cows or Sheep, for the dunging of all Vegetables.

Nevertheleſs we have not written theſe things to that end, as if it were neceſſary to plant Rocks with Vines, by the help of the Vinegar of Wood. Our purpoſe is only to ſet forth how the great efficacy of the juice of Wood may be known, and how by its help, fertility may be procured even to the hardeſt Rocks, which being hitherto unknown and unheard of, my diligent ſearch and enquiry hath now brought to light. Let it not ſeem abſurd to any, that I aſcribe ſo great power to the Vinegar of Wood; for common Vinegar doth the ſame thing in ſoftening of hard Rocks: Why then ſhould not this acid juice of Wood do it, which far exceeds the common in ſtrength and ſharpneſs? It is ſaid, that *Hannibal* made a paſſage through the *Alps*, for himſelf and his Army, ſoftening the Rocks by the benefit of Vinegar; what Vinegar that was, Hiſtories do not mention. Perhaps it was the Vinegar of Wine; but if he had had the Vinegar of Wood, he might ſooner have attained his deſire.

This *Arcanum*, without doubt, will give occaſion of finding out many other profitable things, by the help of this Vinegar. I have opened the way, let another come, who by ſearching further may enlarge it, that thereby ſome perfection may the ſooner be acquired. There are many things lie hidden in Nature, which through our ſloth and negligence not being ſought after, yield no profit to Mankind. But I doubt not but time will produce ſedulous men, who will make a further progreſs in this Vinegar, ſo that much profit may redound from it.

There is found another kind of ſtones, which for the moſt part is uſed for the building of Houſes, which being ſoft, is eaſily cut, ſo that ſteps or ſtairs, and Window-frames are made of it. It is to be reduced by the help of Fire into a Calx of a white, aſhy, and reddiſh colour; it alſo refuſeth to be melted; nor is it like to Sandy ſtones, but is Partaker of both natures, and contains much Salt-Petre. But neither by its reduction into a Calx, nor by the pouring on of water, can it be extorted from them, except it be firſt prepared after a ſingular manner, for then it yields to water; concerning which thing I have written a peculiar Treatiſe, which God willing ſhall ſhortly come forth. There are whole Mountains of this ſort of ſtone, containing a great Treaſure of Salt-Petre, which hath hitherto been known to none.

Theſe few things I was willing to offer to Country-men, concerning the preſſing of wood, and the utility thereof. The Circulatory Veſſels in which the juice of the wood, and all the ſalts of the Air are animated by an unceſſant motion, and converted into Salt-Petre, I will not divulge at this time, but reſerve them for my ſelf and my Friends. [*Theſe are deſcribed in the Third Part of* The Proſperity of *Germany*.]

In the mean time this excellent Art will not ſleep, but will be exerciſed in many places. Now whoſoever ſhall need the ſame, he will know what is to be done. For I have determined to beſtow the ſame for the good of my Neighbour, leſt it ſhould be buried with me in oblivion.

I have alſo an Artificial Invention (*which is taught in The Proſperity of* Germany) of turning common ſalt in the ſpace of a few hours, ſo that it ſhall be plainly like Salt-Petre, for the enriching of poor, lean fields; and yet an hundred weight of it will ſcarce coſt a *Doller* (*which is about* 4*s.* 6*d.*) Which is indeed a ſingular Gift of God in theſe laſt times, which will be highly profitable both to the Rich and Poor, in all places of the World. For if the Culture of Wine and Corn ſhall every where become better, and more profitable, by the help of this Art, it cannot be, but that all men will receive profit, and obtain a more commodious way of living.

For by this Art, not only all Fields, whether they have lately brought forth Fruit, or whether they have lain fallow, and for ſome time brought forth nothing, are brought to that condition, that they may bear Fruit every year: but alſo barren places, which would never bring forth any Fruit, are rendered fertile, and fit to bear Fruit; ſo that no place can be found in the world, how barren ſoever it be, which by this *medium* may not be rendered fertile. Moreover, this Art is to be greatly eſteemed, becauſe by it ground may be fattened in thoſe places where no Cattel are found, and therefore afford no dung; ſeeing that hitherto no other than the ordinary way of dunging hath been known.

So alſo in places far remote from the Dwellings of men, to which Dung cannot be carried, this Art may be exerciſed with great profit; eſpecially when Dung is difficult to be procured, or coſts dear, and is not carried to thoſe remote places without great charge, for which reaſon they cannot be tilled, but are forced to lie uncultivated.

Seeing that one Hogſhead of my fattening Salt can effect more than ſome Cart-loads of common Dung. Nevertheleſs this is to be noted, That when any Field dunged with the ſaid ſalt, is to be ſowed with Corn, the ſeed is firſt to be macerated or ſteeped for one night in water, in which that ſalt is diſſolved. For being ſo prepared, it will grow faſter than if it had been committed to the Earth, without any foregoing maceration.

Conſider, when the Souldiers have taken away the Horſes and Carts, carried away the Oxen, devoured the Cows and Sheep, and waſted the whole Country, by what means ſhall the waſted Fields be dunged and reſtored to the Husband-man, that returning to their former fruitfulneſs, he may reap from them the expected Fruit.

Indeed, in time of Peace, when Horſes and Oxen abound both for the ploughing of the ground, and making of Dung, Dung is alwaies of worth, there never being too much of it, and therefore this my Invention may bring not a little profit. Whence it may be of a far greater advantage in thoſe pla-

ces, where (by the Divine permiſſion) thoſe Locuſts have eaten up all things. Ought we not then to receive ſo excellent a Gift of God with all Thankfulneſs?

The Omnipotent GOD give to us all His Grace, that we may ſhun all temporal and carnal Security, as the deceitful ſnare of the Devil, and ſeek after that which is eternal, conſtant, and perpetual. Amen.

Arcanum II.

Being a Gift preſented to rich Merchants, &c. *that they may improve their Money and Eſtates without Uſury.*

ALthough I had determined to treat of this *Arcanum*, with other excellent uſes of *Salt-Petre* in the emendation of Metals, in the Third Part of *The Proſperity of* Germany; yet for certain reaſons I have deferred the publiſhing of that Book for ſome time; but conſidering my profitable Inventions of making *Salt-Petre*, and not doubting but that there will be found men who will put *Salt-Petre* to better uſes than that of making Gun-powder, I could not forbear here to deſcribe one good and profitable uſe of the ſaid ſalt in the emendation of Metals, which is free for any boldly to experience, ſeeing that I have written the very Truth. He that ſhall follow the ſence of my words, and hath ſome skill in metallick Labours, will not loſe his pains, but will thence reap no contemptible profit. But if any man would perſwade himſelf that ſuch a work is to be done without labour and trouble, and great Maſſes of Gold to be obtained with idleneſs, he will be greatly deceived, not conſidering that this requires his putting his hand to the plough, and uſing great diligence.

I have deſcribed the following Operation openly and clearly; affirming, that it will ſucceed to the Operator, according to my deſcription. If any ſhall erre in the performance, let him blame himſelf and his own ignorance, and not me. For in this proceſs all things are plain, and to be underſtood according to the Letter, and may alſo be performed by an eaſie imitation.

The manner of the Operation.

R. of Copper one part, of Gold or Silver two parts, and of *Regulus Martis* three parts, all which melt together in a good and well-covered Crucible, taking great heed that no Coals fall into the Crucible and corrupt the Work. All being melted, and the cover taken off, yet warily that no Coals fall into the Crucible, caſt in as much *Salt-Petre*, well dried and powdered, as there is of Copper and *Regulus* in the Crucible, to the melted matter, and again cover the Crucible, with the ſame caution about the Coals, which ſo put about the Crucible, that they may not lie upon its Cover, but it may be at liberty, to be commodiouſly lifted up with the Tongs for the inſpecting the Maſs in the Crucible. For if the Fire ſhould be too great, the *Salt-Petre* would boil over the Crucible, and inferr loſs. And this may eaſily happen, ſeeing that the *Salt-Petre* entring and working upon the *Regulus* and Copper, ſwelleth and riſeth up. Wherefore it is neceſſary, that this Work ſhould be done in ſuch a Furnace, as I have deſcribed in the Fourth Part of my Furnaces, having its doors, by which the Fire may be governed, and rendered ſtronger or weaker.

After that the *Salt-Petre* hath imbibed the *Regulus* and Copper, and turned them into a reddiſh *Scoria*, which is wont to be done in the ſpace of a quarter or half an hour, the lower door being opened, the upper one muſt be ſhut, that the Fire becoming ſtronger, may melt the *Scoria*, till they flow like water; which when you ſee, by lifting up the Cover a little, remove the Coals about the upper part of the Crucible, and take off the Cover, and having taken good hold of the Crucible with your Tongs, lift it out of the Furnace, and pour out the melted matter into a melting Cup or Cone, [*Such a one is deſcribed by its Figure in the Fourth Part of Furnaces.*] being firſt heat, and well ſmeared within with Wax; in the bottom of which, when cold, there will be a *Regulus* of pure Gold, which being freed from the Scoria, will be ſo much encreaſed in weight, as it hath attracted from the Copper and *Regulus Martis*, which will be the fiftieth part of the weight of the Gold.

The red Scoria, which have a fiery taſte upon the Tongue, contain the Salt-Petre, Copper, and *Regulus* reduced into a Scoria; which if you would ſeparate from the Salt-petre, as ſoon as you have parted it from the *Regulus*, put it again into the Crucible in the Furnace, put a Coal to it in the Crucible, which being well covered, let it again flow well for a quarter of an hour. In this Operation, the Coal or Coals put to the Metals, *viz.* the Copper and *Regulus* of Antimony, will ſeparate them by precipitation from the Salt-Petre, ſo that they will become a *Regulus* together, and the fixed Salt-Petre will be ſeparated, and reſt upon the *Regulus*, from which being cooled, it may be removed by knocking it off. If the operation be rightly performed, you will recover almoſt all the *Regulus* and Copper: but little alſo of the Salt-Petre is loſt, which hath now put on another nature, becomes fixt, and anſwereth in virtue to the ſalt of Tartar. NB. Becauſe thoſe Scoria cannot be ſo perfectly removed from the Salt-Petre by the Coals, but it ſtill retaineth ſomewhat of the Copper and *Regulus*, which the Coals could not precipitate; they may be kept in ſome warm place, leſt they be diſſolved by the air, till you have a quantity of them; which being reduced by burning Coals, may yield their Metal. Of which more ſhall be ſaid anon.

This Labour, although it ſquares not with the capacity of the rude and unskilful, nevertheleſs it is eaſie to be done by thoſe who have any knowledge in the melting of Metals. But all the manners of operating cannot be ſo accurately delivered, that every unskilful man ſhould preſently be rendered capable of underſtanding them; I write the Truth openly, and he that well underſtandeth me, may rejoice with profit. I write not to unskilful *Tyro*'s, but only to thoſe who know how to handle Metals in the Fire. It may be here asked, Whether this augmentation of the Gold, ariſeth from the Copper, or from the *Regulus* of Antimony? I anſwer, from both, but more from the Copper than from the *Regulus*. For there is no Copper or Antimony found, from which Gold is not elicited after the aforeſaid manner, ſeeing that there is in both an inviſible and ſpiritual Gold, nevertheleſs one containeth more than another; and being

being melted with Gold, give it forth to the ſame, which alſo attracteth it. Therefore as often as Copper, and Regulus of Antimony, and Salt-petre ſhall be melted together with Gold, ſo often will the Gold receive an encreaſe; ſo that this Labour being repeated eight or ten times every day, there will be an augmentation of the Gold not to be contemned, for beſides all the Coſt, it will afford the daily Gain of one Floren out of an hundred. (*A Floren is* 2 *s. in* Germany, *about two and twenty pence value in our Money.*) This is certainly a profit to thoſe who will put their Money to Uſury, much more honourable and ſafe than their truſting it in the hands of others.

But ſeeing that this Labour is to be performed in Crucibles, (and that too in large ones, if the gain aforeſaid be expected) it doth not want its trouble and difficulties; for if a man will uſe great Crucibles, he can hardly perform the Operation above three or four times in a day; and if he uſe ſmall ones, although it be ten or eleven times repeated in a day, yet the profit will be very ſmall. I will therefore here appoint a way to do it without Crucibles, upon Hearths inſtead of Crucibles, which neither let out the melted matter by running over, or by their cracking or breaking, as Crucibles are wont to do, but alwaies remaining in the Oven or Furnace, ſave the trouble of putting in and taking out of the Fire. For Crucibles, how good ſoever they be, being expoſed to the cold Air, by taking out, and thence being ſuddenly again put into a great heat, are very eaſily broken. From whence it is manifeſt, that great danger of loſing ſome of the Gold attends the uſe of great Crucibles, ſo that their uſe is to be abſtained from, altho' the Work it ſelf be of great profit. But good ſtrong Hearths may be uſed for this Labour, without all danger; for as long as they are left in the Furnace, ſo long they are good, and the melted Maſs doth not flow out. If I had not found out this way of working with Hearths, I ſhould not have divulged this operation, which is as followeth.

The manner of preparing the Hearths or Teſts.

AN Iron Ring or Hoop is to be made, either ſquare or round, of the thickneſs of one finger, and four fingers high (or deep) one ſide being a little narrower or leſſer in compaſs than the other; being well ſmoothed or poliſhed on its inſide, having two ears or handles, whoſe magnitude and ſpace will be known by the quantity of the matter which is to be daily handled. To prepare the Focus or Hearth, place your Ring or Hoop upon ſome ſmooth ſtone, and then put into it, ſo ſtanding, your Earth, being firſt rightly prepared, (*for this purpoſe our* Stafford-ſhire *Clay is excellent, as alſo for making of Crucibles to abide the Fire*) ſo that it may a little exceed the upper ſuperficies of your Hoop, force it down ſtrongly with a broad Iron Hammer, by beating or knocking it in, and what riſeth above the top of the Hoop, cut off with a Knife, that it may be even with the Ring; then remove it with the Ring, and ſtrew upon the ſtone ſome fine ſand, or rather the fine powder of broken Crucibles, upon which ſet the Ring, with the bottom upwards, that the other ſide, which before lay upon the ſtone, may be wrought in with the Hammer, as the firſt, ſo that the Ring or Mould may be exactly filled with the Earth. The Focus or Hearth being prepared in this manner, the larger ſide thereof is to be ſo excavated or hollowed away by a bowed or crooked Knife, having two handles, ſo that the rotundity declining from the Superfices of the Ring, even to its middle, where inclining it ſelf, it may keep the thickneſs almoſt of a finger at the top or ſuperficities of the Ring, and ſo it will become like a Veſſel or Pan, having a round or ſpherical Cavity, ſuch Hearths or Teſts are wont to be prepared of Aſhes, for the bringing of Gold and Silver to a purity in Metallick Mines, Mints, *&c.* at length that hollowed roundneſs is every where to be ſmoothed with a ſmooth and round Hammer or Mallet, and after the ſmoothing, the whole Teſt being inverted with the Hoop, is to be ſet upon a Board, without ſtirring it; if the inſide of the Hoop or Ring were before beſmeared well with Oil, it will the eaſier come off of the Teſt, which being expoſed to the Air, and dried a little, is then to be ſet in the heat of the Sun or warm Furnace, that all the humidity being taken away, it may obtain its requiſite dryneſs, before it be put into the Furnace to endure the Fire; for except it be very well dried, it will crack or chap in the Furnace, and be wholly unprofitable for this Work.

The Teſt being taken out of the Ring, and ſet by, the inſide of the Ring is again to be anointed with Oil or Greaſe, for the making of another Teſt, of which ſo many are to be made as need requires, or the quantity of the prepared Earth will allow. The earth that was left in the hollowing of the firſt being mixed with the reſt, whilſt it is yet moiſt, ſerveth again, ſo that there is no waſte or loſs of the Earth. The ſame earth alſo ſerves for the making of the Covers or arched Roofs with which the Teſts are to be covered, to keep the Coals from falling into the melted matter. NB. There is no need of having two Hammers, ſeeing that one ſufficeth, having one end of a hands breadth, and ſmooth, and the other end round.

The way of making the Covers of the Teſts, which are called Muffles.

FIrſt, a Type or Mold is to be made of Wood, anſwering to the bigneſs of the Teſt, but not with one Handle, as thoſe are made for the purifying of ſilver, but with two oblong Necks, and without Chaps or Chinks, which otherwiſe are wont to happen, that ſo the Cover may remain entire. Then to this wooden Mould the Earth is to be applied, and the Cover to be wrought in the uſual manner.

Of the Figure of the Furnace.

THE Furnace is ſo to be built, that it may have within-ſide the ſpace of an hands breadth all round the Teſt from its Walls, for Coals, the Teſt ſtanding in the middle; ſo that the magnitude of the Furnace is to be proportionable to that of the Teſt, and may be either round or ſquare, provided it be built with good Bricks, or fit Stones, and Lute, or Earth rightly prepared. There ought to be at leaſt a ſpan between the bottom and the grate, which alſo ought not to be faſtened to the Furnace, but ſtanding upon four Feet, that it may be taken in and out by the foreſide of the Furnace (when need requires) being alwaies open. Let the Furnace riſe above the Grate the heighth of a ſpan, being every way cloſe, having no door. Upon this heighth of a ſpan a hole is to be left of an hands breadth and heighth, by

which the Teſt may be inſpected, and the mixed Metals put in and taken out, and the Fire may have its paſſage. NB. But if the Teſt ſhould be above a ſpan over, which would alſo cauſe the Furnace to be the greater; then that hole being too little, would not allow a ſufficient paſſage for the Fire; therefore the hole is to bear a due proportion to them. From this hole, nouriſhing the Fire by its ventilation, the Furnace is yet to be carried up the heighth of two ſpans, to its upper hole or top, where the Coals are to be put in. Moreover, an Iron Cover is to be made with hollow Superficies, with Iron-Buttons, or little Knobs infixed, by which the Lute being put on, may ſtick faſt; the Convex or upper part of the Cover muſt have a Handle, by which it may be lifted up when the Coals are to be put in, and afterwards put down again to ſhut the Furnace. *See the Figure of this Furnace, in all its parts, at the beginning of this* Continuation of Miraculum Mundi, *noted at the top with Pag.* 62.

A, *The Furnace, as it is working.*
B, *The lower part of the Furnace open.*
C, *The upper part of the ſame.*
D, *The Grate.*
E, *The Hearth or Teſt.*
F, *The Muffle that belongs to the Hearth.*
G, *The Cover of the Furnace, with which it is to be covered when the Coals are in and at work.*
H, *The Vent for the Smoak.*

When you will work with the Furnace, firſt put in the Grate, and upon it the foot or prop made of firm Lute, and upon it the prepared Teſt, and upon the Teſt its Cover or Muffle, the foremoſt neck of which ought to come cloſe to the hole on the foreſide of the Furnace, and the hindmoſt neck to touch the back of the ſame. The foot alſo which ſupports the Teſt, ought to touch the fore-part of the Furnace, that the ſpace between the Teſt and the Wall of the Furnace, may be well ſtopt or cloſed. Alſo, if the neck of the Cover or Muffle doth not fit cloſe enough to the foremoſt Wall, the joints are to be well cloſed with Lute mixed with Hair, that the Fire may have no paſſage by them, but may paſs through the hindmoſt neck of the ſaid Cover, and under the Cover it ſelf into the Teſt, and thence out of the foremoſt neck. If the Fire ſhall have any other paſſage by the foremoſt neck, the heat will not be ſufficient to melt the Metal. Therefore the chief Artifice concerning this thing, is the building of the Furnace in due form and proportion. An Iron door is to be fitted to the Furnace under the Grate, for the governing the Fire, by which it may be encreaſed or diminiſhed, as need ſhall require. And the other hole in the ſuperiour and fore-part of the Furnace, by which the Metals are put in and taken out of the Teſt, is alſo to have a door, that neceſſity requiring, the fire may be governed, and if too great, it may be reſtrained. To this alſo a little Chimney or Funnel is to be fitted, which may receive and carry away the noxious fumes of the Metals and Coals, that they may not hurt the Operator. All theſe things being rightly prepared, the Furnace being well dried, is to be filled with Coals, and to be covered with its Cover, a lighted Coal or two being put next the Grate, the doors are to be ſhut, that the Fire may kindle by degrees, by which the danger of breaking the Teſt, and its Cover, the Muffle, by a ſudden heat, may be avoided. The Furnace, Teſt, and Muffle, being all red hot, the Metals (*viz.* the Gold which is to be augmented, and the Copper and *Regulus* of Antimony, from which the augmentation is expected) are to be put upon the Teſt with an Iron Ladle, the great door below, and the little one above, are to be opened, that the Fire growing more powerful, may forthwith melt the Metals on the Teſt, which being rightly melted, a little dry Salt-petre in powder is to be caſt in upon them with an Iron Ladle, which will preſently change a portion of the melted matter into a Scoria: When it flows no longer, but ceaſeth from operating on the Metals, lying upon them like Droſs, a little more Salt-petre is to be caſt upon the melted Metals, which will again change part of them into Scoria. This Injection of Salt-Petre is to be continued ſo long, until the Scoria ſhall be no longer hard, but remain liquid like Water, which is a ſign that the Salt-petre hath abſtracted the Copper and *Regulus* of Antimony from the Gold, and its operation to be finiſhed. And ſo much *Regulus* of Antimony and Copper is not to be put upon the Teſt, [I believe the word *not* is an errour of the Printer, in the Copy, and ought to be left out] that it, when a due portion of Salt-Petre ſhall be added, may be full to the brim, and the Coals not be burnt out in vain, in the empty Teſt, which is well to be noted. The fluid Scoria of the Salt-Petre, Copper, and *Regulus* of Antimony, are ſo long to be kept in Flux upon the Gold, as you think the Teſt can ſuffer it; for by how much the longer the Gold ſhall remain in its Flux, under theſe Scoria, ſo much the more of ſpiritual Gold it will attract from them, and render it corporeal; and the Gain will be ſo much the greater. Nevertheleſs, for the greater certainty ſake, after the Scoria have lain ten or twelve hours in Flux upon the Gold, they may be taken out of the Teſt, to ſee whether the Teſt be yet ſtrong enough to ſuſtain them longer in flux, becauſe in a continual flux they are wont to attenuate and perforate the Teſt with holes, eſpecially if they were not prepared of good Earth, which is able to endure the Fire. Therefore, if you find the teſt yet ſtrong and thick, and not perforated with holes, you may again add the Scoria to the Gold lying in the teſt, and keep them ſo long in flux, as you think the teſt will hold good. When the Scoria condenſe themſelves, and flow with difficulty, a little freſh Salt-petre is to be added, by which being reduced to a thinner flux, they may give nouriſhment and encreaſe to the Gold, which in this operation hath the place of a ſeed, as the Copper and *Regulus* of Antimony ſupply the place of the earth, by affording aliment and augmentation to the Gold; the Salt-petre is in the ſtead of Rain, which moiſteneth the Earth, and rendereth it fruitful; therefore by how much the longer the Gold lieth and groweth in this Earth, ſo much the more encreaſe it obtaineth. After the teſt is no longer fit to bear the fire, or you would leave working, open the lower door of the Furnace, and take off the Cover from the top, that the heat of the fire may be diverted from the teſt, and the Scoria grow thick, and the Gold under them hard, draw out the Scoria by degrees with an Iron Hook, from the Gold, that it may remain in the teſt intire, and in one compact Maſs, and not be mixed with the Scoria, like Grains, and occaſion loſs. All the Scoria being taken out, the Gold is to be freed from the teſt with a thin ſharp-pointed Iron, then taken out with the tongs, and weighed, to ſee what encreaſe it hath got.

NB. That

NB. That as long as the Teſt keeps firm and good, it were better not to take out the maſs, but to be left upon the Gold in continual flux. This is a Labour not to be deſpiſed, ſeeing that the firſt Coals being burnt out, more are to be added only ; ſo that this operation may be continued for ſome daies, without intermiſſiion, provided the Teſts be well made, which alſo ought to be done if you expect any profit; of which you need in no wiſe doubt, if the operation be rightly inſtituted ; eſpecially if the Antimony and Iron, of which the Regulus is made, be good: For the more Gold the Antimony, Iron, and Copper ſhall contain, the more volatile Gold the fixed Gold which is melted under them, will attract to it ſelf. But if you want ſuch Metals as are rich in Gold, and are forced to be content with the common, the Gold will nevertheleſs get an encreaſe in the Operation. NB. When Metals containing Gold are to be had, there is no need to keep the firſt *Scoria* in ſo long a flux upon the Gold, ſeeing that preſently after the Copper and Regulus of Antimony ſhall be turned into Scoria by the Salt-petre, they may be removed from the Gold with an Iron Hook, and new Metals forthwith added, and again reduced into Scoria by the Salt-petre. This labour of removing the Scoria, and adding freſh Metals, being long continued, will add the greater encreaſe to the Gold, becauſe Copper, Iron, and Antimony contain much corporeal Gold, which in their reduction into Scoria, aſſociateth it ſelf with the Gold. Therefore when thoſe Scoria are withdrawn, and new Metals added, it cannot be, but the encreaſe of the Gold muſt be greater than proceedeth from the firſt Scoria, in which only the ſpiritual Gold is rendered corporeal. The addition of freſh Metals, and the abſtraction of the Scoria repeated 10, 15, yea 20 times a day, muſt neceſſarily give a great encreaſe to the Gold, if the Metals contain both corporeal and ſpiritual Gold. The abſtracted Scoria may be reduced in a Teſt of the ſame Furnace (of which Teſts there ought to be many in readineſs) and the Copper and Regulus precipitated from them, and put to other uſes, of which my other Writings every where make mention. And they are precipitated by the Powder of Coals, or Antimony. The way of precipitation is this; the Salt-petre hath abſorbed the Sulphureous Metals, *viz.* the Copper and *Regulus Martis*, and changed them into Scoria. Now, if to theſe Scoria ſome other Sulphur be injected, which the Salt-petre coveteth more than the Copper and Regulus of Antimony, it layeth hold on that, by which thoſe Metals which it had firſt abſorbed, are diſmiſſed, and fall to the bottom. But the Regulus and Copper cannot be ſo ſeparated by precipitation, but that ſomewhat of them will yet adhere to the Salt-petre. Theſe may be fixed together, that they may render Gold again in fuſion, or the fixt Nitre may be extracted from the Scoria, with Rain-water, to be uſed for other Labours ; as ſhall be taught hereafter. The reſidue of the Scoria will be yet of uſe to Potters, to glaze their Earthen Veſſels. But if the Scoria and Salt-petre be not ſeparated, but left together, they may be uſed with greater profit for the making of Salt-petre, or for the dunging of Land (of which we ſhall preſently ſpeak) than if they be ſeparated. The manner of doing theſe things ſhall be deſcribed in their order. But firſt it ſeems good to me to exhibit a proof, by which every one may know the certainty of this matter, *viz.* that this work doth not only afford a profit to the Operator, not to be contemned, but alſo that the Gold doth obtain a true and certain encreaſe from the Copper and Regulus of Antimony, whereby the Work may be undertaken with the greater boldneſs and confidence; which I thus demonſtrate. Take a ſmall piece of ſilver, freed from its gold by *Aqua fortis*, that you may be ſure there is no Gold in it : to which, in fuſion, adjoin ſo much Copper and Antimonial Regulus, as being reduced into Scoria by Salt-petre, and again ſeparated from the ſilver, may leave it malleable and ductile. This being diſſolved in *Aqua fortis*, will leave at the bottom undiſſolved a reddiſh powder of gold, which it hath attracted to it ſelf from the Copper and Regulus of Antimony. Now, ſo much as there ſhall be of this Gold, ſo much and no more corporeal Gold did the Copper and Regulus contain, which the Silver hath abſorbed. The Scoria poſſeſs no more corporeal Gold, but yet abound with ſpiritual, which you may find by the following Experiment. Cover thoſe Scoria put into a new Crucible with Powder of Coals, and ſet the Crucible into a ſmall Wind-Furnace, that they may melt. In this melting, the Nitre will rather enter the Sulphur of the Coals, than that of the Metals; and aſſociating it ſelf to that, diſmiſſeth the Copper and Regulus. Which being done, pour out the melted Maſs into a Cone, and when it is cold, ſeparate the Regulus ſeparated to the bottom, which will be the ſame Copper and Regulus of Antimony which the ſilver hath deprived of their corporeal gold ; which is demonſtrated as followeth : Take a bit of Silver, cleared from its Gold, which join with the ſaid Regulus by melting, and reduce the melted maſs by Salt-petre into Scoria, as before, pour the maſs into a Cone, and being cold, ſeparate the Silver. This being diſſolved in *Aqua fortis*, leaves at the bottom no reddiſh powder, as the firſt ſilver did. By which it clearly appears, that the Copper and Regulus of Antimony had yielded all their corporeal Gold to the Silver in fuſion, which nevertheleſs can afford no gain, except the Labour be many times repeated with freſh Copper and Regulus. But becauſe this repetition is wont to require no ſmall quantity of Copper, Regulus of Antimony, and Salt-petre, to bring the ſilver to a golden nature ; and moreover, every one knoweth not how to make profit of the Copper and Regulus, deprived of their Gold, or to put them to other uſes, and that Salt-petre is not ſeldom ſold at a great price, no great profit can accrue by this Labour to ſuch. Nevertheleſs, they will obtain no ſmall gain, who after the extraction of the gold, know how to uſe the Copper, Antimonial Regulus, and Salt-petre, which I have ſhewed in many places of my Writings. But thoſe Metals being melted with Gold, and turned into Scoria by ſalt-petre, bring far greater profit than when wrought with ſilver. For ſomewhat of the ſilver is conſumed, as well as ſomewhat acquired by it; but nothing of the gold is loſt, if the Crucible be firm, that nothing run out. NB. If any gain be expected from ſilver, ſuch Iron, Antimony, and Copper are to be uſed, as are pregnant with Gold, and to be often abſtracted from the ſilver, and the metals themſelves afterwards to be put to other uſes, bringing profit, to ſay nothing of the Salt-petre, which may be made at a far cheaper rate (that it can be bought) by thoſe who ſeek profit from Silver. I have inſtanced theſe Experiments, to demonſtrate that every Cop-

per, and every *Regulus Martis* contain ſomewhat of corporeal Gold, and being reduced into Scoria, do yield it to the adjoined Gold or Silver; and that nothing more can be extorted from them, except being reduced into Scoria by Nitre, they be for ſome time kept in Flux upon the ſilver, or Gold which is better, that their ſpiritual Gold may inſinuate it ſelf into the corporeal, and augment it, which the following Experiment ſheweth.

Take of Copper, and Regulus of Antimony, deprived of all corporeal gold, by the addition of other gold, what quantity you will, melt them with gold, and convert the Copper and Regulus into Scoria, after the uſual manner, with *Salt-Petre*, which keep in Flux upon the Gold for 6, 8, or 10 hours, and then pour all out into a Cone; the gold being ſeparated from the ſcoria, and weighed, will ſhew what it hath gained in this operation. This encreaſe from the twofold matter added, *viz.* the *Copper* and *Regulus Martis*, is profit; which notwithſtanding proceeds more from the one than the other, as this Experiment will prove. Take one part of ſilver, which holds no gold, and one part of *Regulus Martis*, being melted in a Crucible, reduce them, as hath been often ſaid, by ſalt-petre, into ſcoria, and being well melted, pour them out into a ſmall Ingot; which when cold, ſeparate the ſcoria from the ſilver with a Hammer; the ſilver will be pure white, and of very eaſie fuſion, but will contain nothing of gold. NB. If to the ſilver and Regulus of Antimony, you ſhall alſo add Copper, and then turn all into ſcoria by the help of ſalt-petre, and when well melted, pour them into an Ingot, ſo that the ſcoria flow upon the ſilver. This ſilver being ſeparated from the ſcoria with a Hammer, or by lying a while in water, you ſhall find that part which was covered by the melted ſcoria, to be all over ſo gilt, that you can ſcarce rub it off with your fingers, which Gold hath adjoined it ſelf to the Silver, chiefly from the Copper. For if more Gold had proceeded from the Regulus, the melted Silver would alſo neceſſarily have been gilded by that, which yet without the addition of Copper is not wont to be. Nevertheleſs, let no man perſwade himſelf that the Regulus of Antimony being omitted, the ſame augmentation would happen, becauſe the greateſt part of the Gold proceeds from the Copper. For without the Regulus, the Copper would not ſuffer it ſelf to be reduced into Scoria by the Salt-petre; ſo that neceſſity requireth, that all thoſe matters ſhould be conjoined in the ſaid manner, to acquire any profit.

Here thou haſt, benevolent Reader, Specimens ſufficient for the trying the truth and certainty of this thing: It's free for every man to enter upon the preſcribed way with greater and longer Operations, that he may attain the deſired profit.

What I have many times ſaid, I ſay again, That this Operation is true, and brings great profit, provided it be inſtituted in a due manner. The Salt-Petre is the chief thing required in this Operation, which he that knows how to prepare with ſmall coſt, and underſtands what I have written, may boldly undertake the Work; but he that muſt buy it at a dear rate, I will not adviſe to meddle with it. He that cannot underſtand what I write, 'tis better for him to ſpare his labour and charge, and employ himſelf in thoſe things which do not exceed his capacity.

It behoveth me now to ſhew the uſe and benefit which the ſcoria which are left in this Operation are of, that there may be no waſte or loſs. But the quantity of ſcoria in this Operation will be more or leſs, according as it ſhall be exerciſed. If good Antimony, Copper, and Iron, which contain corporeal Gold, may be had in plenty, and Salt-petre alſo cheap, the loſs will not be great, if the ſcoria ſhould not be altogether put to the beſt advantage. For if there be enough of the Copper, *Regulus-Martis*, and Salt-petre to be had, they are to be reduced into ſcoria, flowing upon the Gold, that with it they may leave the Gold contained in them. But here no regard is had to the ſpiritual or fugacious Gold which they contain, which is laid aſide with the ſcoria, and new Copper and Regulus is put to the Gold, and the ſcoria again laid aſide for other uſes, ſo that in one and the ſame day, this labour of adding new matter, and as oft ſeparating the ſcoria, may be repeated ten or twelve times. Whence it comes to paſs, that the Gold is every time inriched, and attracteth more corporeal Gold from thoſe matters in one day, than it could do in fourteen daies, if they contained only ſpiritual Gold. But on the contrary, a great quantity of Copper, Regulus, and Salt-petre are required for this labour, which if they cannot be had cheap, the charge will be the greater, ſeeing that thoſe Metals which are pregnant with corporeal Gold, will abundantly compenſate the charge, eſpecially if benefit be made of the ſcoria, which we will preſently ſhew. But if a quantity of the ſaid matters be wanting, and vulgar Antimony and Copper be uſed for the extracting the ſpiritual Gold only, there will not be made ſo many *Scoria*; but it ſufficeth, that the firſt ſcoria be left ſo long in flux upon the gold or ſilver, until they have yielded ſome augmentation to the ſame. And in the mean time, the addition of no other thing is required, but Salt-petre, of which a little is to be injected to the hardened ſcoria, to render them more fuſile, and to cover the Gold the better with their flux. This way will not coſt ſo much, beſides a good quantity of Coals: Nor will the Work it ſelf be ſo troubleſome, ſeeing that it need be inſpected only once in two or three hours, and any Boy may govern the fire. Or if the Furnace be ſo built, that (like a dull *Henry*) the Coals conſtantly ſliding down, the fire may feed it ſelf, the Operation may be continued night and day without any looking after. In the working the other way with Metals containing corporeal Gold, there is more labour and care, ſeeing that every hour the ſcoria ought to be removed, and new metals to be added. Therefore every man may chuſe that which is moſt convenient for him.

Moreover, where neither Antimony, Copper, or Iron abounding with corporeal Gold, are to be had, the Operation may be inſtituted in another manner, and applied to the making of ſalt-petre in abundance, and with ſmall coſts. For after the Regulus and Copper, in flux upon the gold, are reduced to ſcoria, they are not to be removed, as otherwiſe they are wont, but the Copper with the Regulus muſt be precipitated from the Nitre, by the Powder of Coals, in which precipitation the gold taketh to it ſelf the metal reduced into ſcoria, ſo that the fixt Nitre only is to be removed, which is afterwards to be put to other uſes: And the Copper and Regulus, by the addition of new ſalt-petre, are again to be reduced to ſcoria, and to be precipitated from the Nitre by the Powder of Coals, and the Nitre again removed. So the Copper and Regulus will alwaies re-

remain in flux upon the gold in the Teſt, and nothing but the added Nitre will be every time ſeparated.

NB. This Labour doth not indeed draw forth ſo much gold as that which hath new metals added every time to the gold; but yet it excelleth that in which the Metals are kept in a continual flux upon the gold, without the addition of new; for as often as the Copper, with the Regulus, are burnt by the Nitre, ſo often the Nitre burneth and conſumeth ſomewhat of their ſuperfluous ſulphur, and by how much the more the combuſtible ſulphur is burnt and conſumed, by ſo much the more the ſpiritual gold in it is diſſolved, and adjoineth it ſelf to the corporeal gold, to get it ſelf a body.

And this is the difference of thoſe Operations, of which a man may chuſe which he pleaſeth, or rather that which fits the matters, he hath at hand. Whichſoever he ſhall undertake, it will afford a profit not to be ſlighted, eſpecially if he pay not too dear for his Nitre, or can make it himſelf at a cheap rate.

How Profit may be made of the Scoria *which remain after this Operation.*

IT behoveth the ſtudious of Art to know, that there is a difference in the ſcoria removed from the gold by the forementioned Operations. Thoſe which are removed from the gold only remaining in the teſt, and in which the Nitre, Antimony, and Copper remain mixt, are metallick, from which the Copper and Regulus may be precipitated and ſeparated, by the caſting in of crude Antimony or Powder of Coals. The ſcoria from which the Metals are already precipitated in the teſt, are nothing but fixt Nitre. The ſcoria alſo differ, in which the Metals are precipitated by Antimony, from thoſe which are precipitated by Coals; thoſe partake more of ſulphur, theſe leſs; for the ſulphur of coals differs in its nature from the ſulphur of antimony, and requireth that a difference be obſerved, and that either ſcoria being put to its due uſe, it may bring the deſired profit. And this is the difference: When the Copper, with the *Regulus-Martis*, is precipitated by coals, that the Copper, with the Regulus of Antimony, is precipitated, but the Iron which was in the Regulus admitteth not of precipitation, but remaineth in the ſcoria; whence it comes to paſs, that the Regulus, after precipitation, is found to be lighter than when it was put into the Crucible. Therefore what the precipitated Regulus hath loſt, neceſſarily remaineth in the ſcoria; for which cauſe thoſe ſcoria are of more hard and difficult fuſion than thoſe which remain after the precipitation with Antimony: For when the metals are precipitated by the caſting in of Antimony, to one pound of ſcoria, an ounce, and ſometimes more, of Antimony, is caſt in, which precipitateth all the Copper and the Regulus attracted by the Nitre, and giveth a more ready fuſion to the ſcoria. But nothing more plainly ſheweth the difference, than the pouring of water upon the ſcoria, to make a *lixivium*. The ſcoria upon which the coals were caſt, yield a clearer and ſharper *lixivium* than thoſe on which Antimony was caſt. On the contrary, the Antimonial ſcoria, by reaſon of the Antimonial combuſtible ſulphur, are of a drier nature and property.

The beſt thing in both the ſcoria, is the fixt Nitre, which is to be drawn out of them by Water, and may be put to various uſes, with no ſmall profit.

In the firſt place, from thoſe ſcoria a good Medicinal Tincture may be drawn by the affuſion of ſpirit of Wine, of which mention is made in divers places of my Writings. Thoſe ſcoria far excel all Dung, and alſo common ſalt-petre it ſelf, in promoting of vegetation. Nevertheleſs, they are firſt to be made more temperate, becauſe they are too fiery to be uſed alone. They alſo effectually promote the augmentation of Gold, and alſo the health of the humane body, by their moſt pure Eſſence extracted by the ſpirit of Wine.

They may without injury be called *The Philoſophick Dung*, becauſe they augment the growing power in Vegetables, Animals, and Minerals, neither in Operations of this kind is there any Equal in the world.

Their ſmell is like that of humane Excrements; nor are they unlike to them in Aſpect, but moſt efficacious in their uſe. There are many things of great moment yet lie hid in them, all which it is not for me to deſcribe. Thoſe things which I have hitherto written, I have often done with my own hands, and proved by many Experiments. What I deliver is not from hear-ſay, or the reading of others Books, being reſolved to publiſh thoſe things only, which an infallible Experience hath taught me, ſo that every man may boldly, and without any doubting, give credit to them.

Moreover, this fixed Nitre is endowed with the ſame virtue with other ſtrong *lixiviums*: Nevertheleſs, it is more efficacious than that of any common Wood, inaſmuch as Nitre exceedeth the fixed ſalt of Wood in its maturity. The reſidue of the ſcoria from which the *lixivium* is extracted, ſerveth for the glazing of earthen Veſſels.

He that deſireth to know more of fixed Nitre, may find it in my *Furnaces*, as alſo in my *Pharmac. Spagyric.* and eſpecially in *The Explication of Miraculum Mundi*; where he will meet with many things worthy of admiration. For the Philoſophick Dung, ſee the 35 Article of *The Explication of Miraculum Mundi*, my Apology againſt *Farnner*, and the Deſcription of my Preſs for Wood, in this Treatiſe; in which places he may find thoſe things which will abundantly ſatisfie him. Concerning this Univerſal (tho' contemptible) ſubject Nitre, we will treat more, God willing, in the following ſecond part of *Miraculum Mundi*.

Here we have ſhewed the well-minded Reader, how by this one only Operation, he may encreaſe or augment his Gold, inrich his Fields with a fruitful ſoil, and preſerve his health; ſo that there will be none who may not receive profit from it.

I cannot but here commemorate what ſome time happened to me in this Operation. When the Copper and *Regulus-Martis* were mixed by melting together, and reduced into ſcoria by Nitre, the matter thence proceeding was wonderful, appearing in variety of fair Colours, emulating a Peacocks Tail. Therefore when I ſaw ſuch various colours, I preſently thought with my ſelf, whether that matter might not be fit for making a Tincture, which might change the imperfect Metals into Gold; ſeeing that I had read in ſome Philoſophers, that there is more Tincture in Iron and Copper than in Gold, which gave me an occaſion of conſidering whether

this conjunction of *Mars* and *Venus*, might not be the Adultery ſpoken of by the Poets, or rather the Vitriol of the Philoſophers; for this matter retaineth a very fair greeneſs, not only in the fire, but alſo out of it, as well wet as dry. Whence I began to perſwade my ſelf, that Iron was the Gold of Philoſophers, Copper their *Luna*, and Antimony their *Argent-vive*, and Nitre to perform the Office of a *Solvent* or Bath, in which they are diſſolved and digeſted. Being moved with all theſe things, that I might make a trial, according to my ſimplicity, I put all the ſaid matters into a Glaſs, and committed it to *Vulcan*, (or the Fire) which being adminiſtred by degrees, all the matter paſſed together into a black colour; to which a very fair greenneſs, with variegated colours reſembling the Tail of a Peacock, ſucceeded, which continued in the Fire for ſome weeks. But ſeeing that it would not at all be changed, I being wearied with the tediouſneſs, took the fair matter out of the glaſs, and put it into a Crucible, which I ſet in a Glaſs-makers Furnace, that I might perform this Operation with the leſs Labour: And after three daies I again took it out, and I found all the matter changed into a glaſs of a bloody colour, but not tranſparent. The Crucible being broken, I found in the bottom a little Regulus of an Iron-like colour, which being teſted with Lead, yielded white Silver, which being diſſolved in *Aqua-fortis*, left no Gold at the bottom. Being ſtrook with admiration, I began to think whence that Silver ſhould proceed, ſeeing that I did not expect Silver, but Gold; at length being ſatisfied in that, I was of opinion, that from this ſubject by one and the ſame labour, might be made both a red and a white Tincture; but I have not hitherto had time and opportunity to try the truth of the matter experimentally. Whatſoever I have here written, is only that I might afford matter to others who are deſirous of ſeeking, by whoſe diligent ſearches ſome good may be obtained. This Admonition I alſo think neceſſary, That they who endeavour to bring any ſubject to a conſtancy in the Fire, by fixing, as the Chymiſts call it, that they lute and cloſe well their Veſſels, leſt the Air (which is a great impediment to the Operation) ſhould hinder the Work.

For Example. A Wood-coal, for the greateſt part, conſiſteth of a fugacious and immature Sulphur, mixt with a few fæces, being put into an open Crucible, and ſet in a ſmall Fire, it is preſently burnt, and being all conſumed, leaveth nothing in the Crucible, but a few Salt-aſhes; but being put into a Crucible well cloſed and defended from the Air, and committed to a great Fire, and therein kept for many years, yet would loſe nothing of its weight, colour and body, but would remain a black Coal, without any alteration. But on the contrary, if any Mercurial ſalt be added to the Coal in a due weight, and be encloſed with it in a crucible but one day, and kept in the fire, the coal will be changed into a red, fiery, heavy ſtone, more Metallick than Vegetable, whoſe admirable Virtues the Tongue cannot declare. Seeing therefore that from any fugacious and volatile Vegetable in ſo ſhort a time a conſtant fixed thing may be made by Art, Why ſhould not the ſame be made much better of ſome Mineral or Metal, which is much nearer to Fixity? And although theſe coals black the hand, nevertheleſs they contain much good, which he that knows how to come at, will by the ſame eaſily make his hands white again, and draw that from it which is more conducive to the health of Man's Body, than from all the coſtly and fading things in the whole World. *A Word is enough to the Wiſe.* Although I have here ſhewed, that ſulphurated Nitre is a true Medicine for Animals, Vegetables, and Minerals, yet I would not be underſtood as if I affirmed there was no other, which is not my intention, ſeeing that if this Medicine were to be generally uſed for Vegetables, it would be too coſtly, [*and there are other things deſcribed in this Book for that purpoſe, which are far cheaper*] and I have ſhewed it only to the end that the wonderful Works of GOD might be manifeſt to thoſe who are willing to try. For if any one will macerate the ſeed of any Vegetable in the Tincture drawn from ſulphurated Nitre, by the Spirit of Wine, in a warm Bath, he may from that macerated ſeed produce a growing Herb, in a few hours ſpace.

A Tincture of this ſort will effect more in curing of Diſeaſes, than a whole Apothecary's Shop. But he that knoweth how to join ſome ſpiritual Gold with this Tincture, that the Gold may thence attract to it ſelf nouriſhment and encreaſe, as a Vegetable doth from the Earth, will eaſily obtain a Univerſal Medicine. But if any think that I mean ſuch a Medicine as changeth the imperfect Metals into Gold, in flux, he is miſtaken, for that is to be attributed to the Stone of Philoſophers only. But I call it Univerſal, as it is the chief Medicine of Animals, Vegetables, and Metals, which I intend alwaies to keep by me, ready prepared, that I may render others partakers thereof. I intend alſo this Winter to prepare a great quantity of the Univerſal Medicine for Vegetables, by the benefit whereof Grain may be made to grow in meer Sand, that ſo this Invention may become profitable to many men, provided they will but undertake the work: Not that I intend to prepare this of Nitre, which is too coſtly for the Dunging of Fields. For common Salt, which is abundantly cheaper, in a few hours, may be ſo changed, that loſing its corroſive Nature and Property, it becomes plainly like Nitre in taſte, figure, and virtue, but not inflamable, and excelleth the Dung of Cattel for dunging of Land. Neither let any man fear that this Preparation of common Salt requireth much labour or trouble, or is difficult to be done; for he that ſhall ſee the Operation but once, will eaſily be able to underſtand and imitate the ſame.

Hence, ſeeing that in all places there are many barren Fields to be found, it cannot be, but that great profit may be acquired by it.

Arcanum III.

A Gift offered to all diligent Phyſicians.

The profitable uſe of Salt-Petre, *in the Concentration of* Metals, *and Preparation of Excellent* Medicines.

ALthough in the Firſt Part of *Miraculum Mundi* I have deſcribed divers concentrations and emendations of Metals; nevertheleſs in thoſe there is nothing common with that *Arcanum*, which I intend

tend here to deſcribe. For thoſe *Arcana* concern only the emendation of the imperfect Metals; but this alſo treateth of the Preparation of many excellent Medicines.

The manner of concentrating and amending of Metals by Nitre.

FIrſt, a Man is to be made of Iron, having two noſes on his head, and on his crown a mouth, which may be opened, and again cloſe ſhut. This, if it be to be uſed for the concentration of Metals, is to be ſo inſerted into another man, made of Iron or Stone, that the inward head only may come forth of the outward man, but the reſt of his body or belly may remain hidden in the belly of the exteriour man. And to each noſe of the head, glaſs receivers are to be applied, to receive the vapours aſcending from the hot ſtomach. When you uſe this man, you muſt render him bloody with fire, to make him hungry and greedy of Food. When he grows extreamly hungry, he is to be fed with a white Swan: When that Food ſhall be given to this Iron man, an admirable Water will aſcend from his fiery ſtomach into his head, and thence by his two noſes flow into the appointed Receivers; a Water, I ſay, which will be a true and efficacious *Aqua-vitæ*; for the Iron man conſumeth the whole ſwan by digeſting it, and changeth it into a moſt excellent and profitable Food for the King and Queen, by which they are corroborated, augmented, and grow. But before the Swan yieldeth up her ſpirit, ſhe ſingeth her Swan-like ſong, which being ended, her breath expireth with a ſtrong wind, and leaveth her roaſted body for meat for the King, but her *anima* or ſpirit ſhe conſecrateth to the gods, that thence may be made a *Salamander*, a wholſome Medicament for men and metals.

This manner of operating, by which metals are wont to be concentrated, I was willing to deſcribe in this Enigma, that it may be known to be no Fable, but that the ſame manner hath been deſcribed by other Philoſophers before me. This appears from the ſixth Key of *Baſil*, where he delivers the like manner. *Baſilius* writeth concerning *Salt-Petre* ſpeaking of it ſelf; *When my End is threatned, &c.* From which words it is manifeſt, that he uſed the ſame way for the particular and univerſal emendation of Metals, as alſo for the preparing of excellent Medicines. But becauſe this Enigma is a little too obſcure for the unskilful, I think good to interpret it word by word.

The Iron man is the deſtilling Veſſel, which I have deſcribed in the Second Part of my Furnaces. This is put into another Iron or Stone Furnace, and the fire under it. To the noſes or pipes of the upper part, ſome Receivers are to be ſo applied, that at leaſt three Glaſs-Receivers may be applied to one noſe, the firſt of which is to be firmly luted to the noſe; the ſecond muſt enter the perforated belly of the firſt Glaſs, by a Pipe; and in like manner the third muſt be inſerted into the belly of the ſecond; the Pipe of the ſecond Glaſs, which entereth the belly of the firſt, is to be well luted; the third is not to be luted to the belly of the ſecond, but to remain open, that the expiring gaſs may go out of the ſecond into the third. To the other noſe alſo three or four Receivers are to be applied after the ſame manner, but ſo that the laſt may remain unluted. The white Swan is the *Amalgama* of Tin and *Argent-vive*, to which Nitre is added; and it is done as preſently you ſhall hear. [*See the Figure of this Furnace, before the beginning of this Treatiſe, noted with* pag. 96.]

A *is the Furnace.*
B, *The Veſſel in the Furnace.*
C, *The Hole with an hollow Verge, through which the Swan is conveyed into the Veſſel.*
D, *The Tongs holding the Cover with which the Veſſel is to be covered as ſoon as the Swan is put in.*
E, *An Iron Ladle, wherewith the Swan is put into the Veſſel.*
F, *The Receiver.*
G, *The Bench that ſupports the Receiver.*
H, *The Laborator.*

R. one part of Tin, melt it in a Crucible, when it is melted, take the Crucible out of the Fire, and pour out the melted Tin into another earthen Veſſel, and mix therewith one part of *Argent-vive*, which will preſently be abſorbed by the Tin, but the Tin will become ſo brittle and friable, that it may be ground upon a ſtone to fine powder. With this fine powder mix two parts of good and pure *Salt-Petre*, by grinding them well together, till the *Amalgama* cannot be known from the *Salt-Petre*, but one white powder be made of both. This powder is *The Swan of Baſilius*, of which he prepareth Meat for the King; but I call it *The Fulmen of Jove*, by which all Metals are deſtroyed and reduced into nothing. And from this nothing, Metals much better and more noble are generated *de novo*. Concerning this deſtruction and regeneration of Metals, conſult *Paracelſus*'s Book of *The Vexation of Alchymiſts*, and the Third Part of my *Mineral Work*, and you ſhall find, that *Paracelſus* hath involved this Operation in obſcure words, as alſo *Baſilius*, who delivereth the ſame in his ſixth Key, with the ſame obſcurity, which here, without any covering, I have openly and clearly made manifeſt.

NB. I would have the ſtudious of this Noble Science know, that *Jupiter* alone, or Tin mixt with Glaſs only, in this artificial deſtillation by the fiery man, yields that medicinal ſpirit, without the addition of *Argent-vive*, and leaveth the meat or augment of ☉ and ☽ in the bottom. But that our Anceſtors have adjoined *Mercury* or *Argent-vive*, I alſo by experience have found it profitable. But it is chiefly done for this end, that the Tin being rendered friable and fit for grinding, may the better be mixed with the Nitre; for it would be laborious and troubleſome to file the Tin to mix and deſtil with the Nitre, as *Baptiſta Porta* teacheth in his Natural Magick. This reduction into Powder by Mercury, is performed in a very ſhort time, and wonderfully promoteth the Labour, whilſt the Mercury acting upon the porous Jupiter, penetrateth him, and rendereth him compact. On the contrary, *The Fulmen of* Jove burneth the wings of Mercury, and maketh him remain ſtable; ſo Jupiter is an help to Mercury, and Mercury to Jupiter, and both become more noble by the power and efficacy of Salt-petre; for Jupiter poſſeſſeth much combuſtible ſulphur, which nevertheleſs burneth not *per ſe*, without ſome help; in the effecting of which *Salt-Petre* is a Maſter, having neither ſuperiour nor equal. Well doth *Baſil* ſay, that ſulphur only is

Nitre's beſt Friend, and alſo its worſt Enemy, which we have found to be moſt true, in this operation.

When the Tin and Nitre grow hot together, they take Flame like Gun-powder; the purer part, like ſome ſubtile ſpirit, vaniſheth into the Air, and the more fixed, ſtable, and better remaineth at the bottom; for the noxious and ſuperfluous Sulphur of the Tin is burnt by the Salt-Petre, which being ſeparated, the reſt of the Tin acquireth a more compact and better body. The Mercury alſo adjoined in this operation, yieldeth whatſoever good he hath, offering his Spirit for Medicine, and his Body for the encreaſe of Gold or Silver; ſo that more profit accrues by the addition of Mercury, than if Jupiter were fulminated by Nitre alone. Very few will believe how noble a Sulphur there is hid in Jupiter, which can be made manifeſt by Nitre only. Truly Mercury can by no way be better deceived and overcome, than by the Fulmen of *Jove*, which caſts a terrour upon all the gods. Therefore they are very wary, leſt they be touched with that Thunder, and ſlain with ſudden death. If Jupiter were deſtitute of his moſt efficacious Thunder, neither his father ♄, nor ☉, nor ☽, with the reſt of the gods, would be ſubject to him. Mars, Venus, and Mercury would only ſport themſelves with him. Mars would ſhew him his Sword, ♀ would intangle him with her amorous Net, and ☿, the deluder of all dreaming Alchymiſts, would fly away, and laugh at him. *Volens nolens* they all fear Jupiter, and muſt allow him the Empire; the converſation of *Jove* is perilous to all the Metals, even as it often brings ſubjects into no ſmall danger, to converſe with their Prince. Hence the vulgar Proverb, *Procul a jove, procul a fulmine*; He that keeps from the fire, is not in danger of being burnt.

But leaving thoſe things, we will now addreſs our ſelves to the operation it ſelf, and plainly ſhew how it is to be performed. And firſt, let the ſtudious know that this Work requires a diligent and skilful Operator; but he who knows not how with skill to handle the Fire, I adviſe him to abſtain from this Work. The Art is true and excellent, ſo that he that underſtands but a little, may ſee the whole Work to ſtand upon a firm foundation drawn from Nature. He that knows the nature of Metals and Minerals, knows that the goodneſs and perfection of Gold and Silver, the beſt of Metals, conſiſts in a ſtable, fixed, and incombuſtible matter, and on the contrary, that the imperfection of the imperfect Metals, proceedeth from a combuſtible and ſtinking Sulphur only; which ſuperfluous Sulphur, if it ſhall be any way ſeparated from them, that which remaineth, ought neceſſarily to be purer, more fuſible, and conſtant in the fire. There are many waies by which that ſuperfluous and combuſtible Sulphur is ſeparated from Metals; of which mention is made in the Mineral Work, and the fourth part of Furnaces. In this operation, the manner of ſeparating it by combuſtion, is performed by Nitre. In this Treatiſe alſo other waies are indicated, yet Nitre is to be uſed in them all.

But the ſtudious of Art ought to know that in this Operation, not only the ſuperfluous Sulphur of Jupiter and ☿ may be ſeparated and conſumed by burning and each Metal concentrated and amended, but alſo to both, or to ♃ alone other Metals may be added, and by the help of Salt-petre may be fulminated and concentred; for the Fulmen of *Jove* doth not only concenter and amend his own proper body, but alſo other Metals adjoined to him. Nor do I know a nearer way of deſtroying Gold and Silver quickly, than the Fulmen of *Jove*, which ſo deſtroyeth all the Metals, that afterwards without the addition of other things, they cannot by any force of fire be reduced to their former fuſile bodies, inaſmuch as in melting *per ſe*, they alwaies paſs into Glaſs, every one being tinged with that colour which is proper to the metal. Gold is changed into a very elegant glaſs, like to a *Ruby*; the glaſs of Silver hath the colour of a *Chryſolyte*; the glaſs of Copper hath a green and red colour like a Jaſper; the glaſs of Mars differs not much from it; the glaſſes of Tin and Lead remain white. Theſe Glaſſes being (by an artificial reduction) reduced into their bodies, are much better and nobler than they were before. This ſudden fire alſo clippeth the wings of Mercury, ſo that part of him is conſtrained with the ♃ to abide the fire. That ſwift fluxing powder which is compounded of Nitre, Tartar, and Sulphur, mentioned in the ſecond part of my Furnaces, is alſo not to be contemned; for when that maſs is mixed with ☿, and kindled by a live Coal, the ☿ is altered, as when it is to ſuffer the fire, it maketh a cracking noiſe, till it breaks through the fire, but being apprehended by the Fulmen of *Jove*, it hath no time allowed it to cry out; for when it beginneth to feel the heat, it ſingeth a Swan-like ſong, but before it can break out from the Fulmen it is killed. *Baſilius* calleth this *The Song of the Swan*, alluding to what the Ancients have delivered concerning that Bird, *viz.* That when ſhe is old, and ready to die, ſhe ſings a ſong, which being ended, ſhe preſently dieth. This Saying the vulgar believe of that Bird, which yet is falſe, ſeeing that I never yet heard any man ſay that he had heard the Song of a dying Swan. The ancient Philoſophers hereby meant our Metallick Swan. But let any one enquire, whether the *Amalgama* of ♃ and ☿ may be compared with a Swan; becauſe it may every way be broken, within and without, it is like to the Feathers of the ſaid Bird, and therefore the Philoſophers have not unfitly called it a Swan. As for its ſinging, it is thus; When the *Amalgama* is mixt with Salt-Petre, and wrapt up in Papers, and one after another of them caſt into the Iron man, the ☿ with the ♃ beginneth to ſing a Song like the fine Note of ſome Bird, which endureth no longer than the crowing of a Cock, ſeeing that the flame preſently followeth, which maketh the ſeparation.

But that any one may be more certain of this matter, I will openly and clearly expound the Operation word by word.

℞. of Tin and ☿ each ℔ j. make an *Amalgama*, as I have taught above; grind this with ℔ ij. of pure Salt-Petre, freed from all its fæces, reducing the whole maſs into a minute powder, till the *Amalgama* can be no more felt by the fingers. This fine powder diſtribute into ſixty equal parts, more or leſs, and put each part into a Paper, ſo that every Paper may contain about two Iothones, or an ounce, wrap them up: This quantity is not to be exceeded, eſpecially if the Iron man and the Receivers be not large; for the leſſer Veſſels require the leſs of the matter: For the matter being caſt into the red-hot Veſſel in Papers, when it taketh flame, giveth a crack or puff like Gun-powder, which is kindled with a Coal. The Labour is eaſie, which may be called *The Work of Women*, or *Play of Boys*. For as ſoon as one Paper is enkindled, the vapours aſcending with ſmoak and wind,

wind, pass into the Receivers, which being quietly settled, another Paper is presently to be cast in, that it may sing its Swan-like Song, and pass into the Receivers in a fume. This casting in of the Papers is so long to be continued till they are all spent. You can scarcely put in above ten Papers, or fifteen at the most, in an hour; for if one Paper be cast in too soon after another, the ascending Spirits of the ☿ and ☽ would not all settle, but some would fly out at the hole of the last Receiver, and be lost. By this means the Iron man is nourished by degrees with his food, *viz.* the white Swan, even as Infants are successively fed by their Mothers.

After all the Papers are in, the fire is to be let go out of its own accord; and when all the Spirits are condensed in the Receivers, the Receivers are to be removed one after another, in which is the *Anima* of Tin and Mercury, and of that metal which was added, of a white or ashy colour, if Tin and Mercury only were used. But if Gold was added, it will be of a purple colour; if Silver, of a yellow; if Copper, the colour will be reddish. And this is not only to be understood of the matter which passeth into the Receiver, but also of that which remains in the bottom of the Iron man. The *Anima* hideth it self in the corporeal flowers which ascend into the Receivers, by which it is the more easily acquired, and which otherwise, perhaps, by reason of its great subtilty, would be very difficult to obtain. If you can put your hand into the Receivers, you may take out the flowers with a bent spoon, which hide the *Anima*; but if not, with an Iron Wier fitted for the scraping them off, or by washing them out with Water, which are to be handled further, as you shall presently hear.

The mass remaining in the stomach of the Iron man, being taken out when it is cold, hath a fiery nature and a white colour, if it were only of Tin and Nitre, but if any other metal was added, the colour will be varied, as above. This mass cannot be reduced to its former body by Fire alone, how vehement soever it be, seeing that when it is melted, it runneth into glass, and that too very difficultly. Nevertheless, by the following operation it may be reduced to its pristine Body: Put it into a very strong Crucible, which cover, and set in a Wind-Furnace that will give a very strong Fire (such as is my Fourth Furnace) the Fire being raised by degrees, let it be made white-hot, and when it is so, the Cover being a little removed, throw into the fiery mass a little Sulphur, Antimony, or Coals in fine powder, put on the Cover again, and lastly, cover the Crucible over with Coals, that all the matter may flow well. In this operation the combustible Sulphur will enter the fixt Nitre, and separate it from the fixed Metal, and with the same, whatsoever of Sulphur, Antimony, or Coals was added, will be turned into black Scoria. The Tin, with the Mercury, and the Metal, if any were added, separateth it self from the Scoria, and returneth into a metallick body, which after it is poured out and cold, is to be separated from the Scoria. Jupiter hath the aspect of his former body, but is amended, as the proof will shew him that pleaseth to make it; the remaining Scoria are to be kept, because an excellent universal Medicine may be made of them. The *Regulus* being melted again, is again to be amalgamated with its own weight of Mercury, which *Amalgama* is to be mixed with its equal weight of Nitre, and put up into Papers, and again cast into the Iron man, as we have shewed before, that the Flowers and *Anima* may be collected and added to the former. The remaining mass is to be precipitated with sulphur, as before, and the Scoria being separated from the Regulus, to be added to the former, and the Regulus to be again brought with Mercury to an *Amalgama*, that with Nitre the Flowers and *Anima* may be again elicited. This Labour is to be so often repeated, until half the Regulus be converted into scoria: That part which remains being examined by the Cupel, will shew how much gold and silver is generated by this Labour. Which profit will serve to buy other Coals and Metals to carry on the Work. The *Anima* which passed into the Receivers yieldeth a most excellent medicine; so do also the scoria which were reserved at divers times, afford one little inferiour to that; and how they are to be handled, we will teach in order. Therefore by this only operation a universal medicine for humane and metallick bodies is acquired particularly, and from the remaining part, an amended metal paying the necessary costs which are required for the continuing the great Work.

How therefore particularly of Tin and Copper often fulminated, one may get a profit not to be contemned, I will clearly shew; forasmuch as I have not performed that labour only once, but many times; in like manner I will deliver the way and mode whereby an excellent medicine may be prepared for the curing of all curable Diseases, which also I have often done. But how a Universal medicine may be prepared of the *Anima* of metals, for humane and metallick bodies, I cannot teach; for I have not hitherto had time and opportunity of perfecting so great a Work. Nevertheless, I do not at all doubt, but that the Philosophick stone may be made of this *Anima:* But by what means I think this may be effected, (saving to every man his own judgment) I will not conceal from the studious of the Divine Wonders. What I have done with my hands, I can render others the more certain of; those things which I have not done, I leave as they are. The beginning of the Labour I have clearly enough proposed; from which, if any man cannot learn more, 'tis best for him to abstain from this kind of Labour.

All the Philosophers cry out with one voice, *Fix the volatile, and volatilize the fixt*, and you shall have the true universal medicine. From which scope he will not erre, who shall take good subjects for his work. Therefore, because in this our operation, Gold (besides the rest of the metals) being endowed with a most pure body, is rendered volatile and fugacious, and stript of its *Anima*, verily it will be credible, that of the *Anima* of Gold, if the *Anima* of Mercury shall be joined with it and digested to fixation, may be made the *Salamander* constant in the Fire. The purple *Anima* of Gold and Mercury which hath passed into the Receivers, I free from the Flowers of Tin, by washing it out with the sweet universal Water, known to every one, filtring it through Paper, coagulate it, and then fix it into a tinging stone. And I doubt not, but some good thing will thence proceed.

From the scoria remaining after the reduction, you may easily extract a medicine. Nevertheless, those scoria are divers, and have a diverse nature; for those which remain after the operation with Tin

and Argent-vive, are of another nature and property than those which proceed from the working with other Metals adjoined to those two, as Gold, Silver, Copper, or Iron. Every Metal hath its own proper powers and virtues, which in the extraction of the Scoria go forth together, and render that Extract more noble, or else diminish its virtues. Gold and Silver have a different nature and properties from Copper and Iron. Nevertheless Copper and Iron are not malignant or hurtful in the Scoria, but also possess great virtues. Nevertheless the greatest virtues which are elicited from the Scoria, are to be taken for a Tincture of Sulphur; for the Metals being destroyed by fulmination, and again reduced into a body, leave but a very small part in the Scoria, seeing that their greatest part returneth into a metallick body. Therefore the Scoria principally consist of fixt Nitre, and that Sulphur by which the destroyed Metals are again reduced into a metallick body from the Nitre. The Scoria of the Metals destroyed and precipitated by Coals, or common Sulphur, have one and the same nature, virtues, and properties. The Scoria of that reduction made by Antimony, partake of another nature, to wit, of a grosser and stronger than those which are made by common Sulphur or Coals, for they sometimes cause vomiting, which the other do not.

And this I would note, that because Antimony as yet containeth many Arsenical qualities, common Sulphur containeth but few, and Coals none at all; that therefore also the Scoria made by these, are safer than the other; nevertheless, I confess that those are somewhat cruder, and more immature than those made with Antimony; but being extracted with Spirit of Wine, yield an excellent Tincture, which is a kind of a Universal Medicine; for it is sufficiently known, that no subjects (Gold and Silver excepted) are found fitter for Medicine, than Antimony and common Sulphur. And because Wood-Coals exactly answer to this common Sulphur in their nature, properties, powers, and virtue, therefore I commend the Scoria's made by them, and prefer them to those prepared by Mineral Sulphur and Antimony; not that there is a greater efficacy in Coals than in Antimony and common Sulphur, but because those of Coals dissolved by fixt Nitre, are rendered more apt and easie to render their virtues to Spirit of Wine, are of a more easie extraction, and are somewhat more familiar to the animal nature, than common Sulphur and Antimony. But the Medicine prepared of either of those Scoria, is efficacious, and differeth but little in its external species and colour. All the difference in those Tinctures, is, That that which is extracted from the Antimonial Scoria, if it be taken in a little the larger dose, before fixation, causeth vomiting, and operateth more forcibly than the other two. All three after the manner of sulphurs, gild silver, help the growth of Vegetables, by dunging, and nourish and augment Gold being made spiritual, and closed up in the moist way.

And although I do not yet know what it can perform in the transmutation of Metals, yet I am perswaded, that if it were fixed and rendered constant in the Fire, and made to have ingress into metals, that it would effect something in transmutation. It sufficeth me at this time to have indicated the way by which a universal Remedy against all curable Diseases, is to be prepared of the remaining Scoria. He that desires to know more, let him set to his hand, and search farther; the way is opened to him: But if he desires somewhat better, let him set upon the Spirit of Mercury and Gold, which is forced into the Receivers, and search for it in that. As for the remaining parts, *viz.* the metallick flowers, and the running Argent-vive, which passed together into the Receivers, the running Argent-vive may be separated from the Flowers, and used again for the like labour, by amalgamating it with Jupiter. The Flowers are again to be reduced with the fulminated metals, that nothing of the Gold and Silver may be lost; so this labour being continued, will give a perpetual encrease of Gold and Silver, besides the tinging *Anima*, and the Expences will be only for the Salt-Petre, which will be little to those who know how to make Salt-Petre themselves, for the making of which, I have shewed the way; so that without any great labour, trouble, and cost, not only an honest livelihood may be gotten, but also a good medicine, for the relief and comfort of the forsaken Sick.

But before I conclude this my concentration of metals by Salt-petre, I think fit here to adjoin some admonitions for the benefit of the studious of these Labours. When in the reduction of the metals destroyed by the Fulmen of *Jove*, the scoria are left too long upon the gold, and not poured off in due time, they (after a certain magnetick manner) attract the remaining *Anima* which the Fulmen hath left in the Gold, and leave the whole pale. If Argent-vive be amalgamated afresh with this pale Gold, and this Labour sometimes repeated, the Gold will be wholly spoil'd of its *Anima*, being partly driven into the Receivers, and that which is left attracted by the scoria, then the gold loseth all its colour, and the scoria put on a bloody colour. From this red scoria the Tincture is to be extracted, by a certain singular Artifice, and to be used in the known manner. The pale Gold recovereth its yellow colour by Iron, Copper or Antimony.

Moreover, this is also to be observed, When by the Fulmen of *Jove* the *anima* of ☉ and ☿ is propelled into the Receivers, the Receivers being taken off, the Flowers which hide the *Anima*, are to be taken out, and kept in Glasses close stopt. For the said *Anima* of ☉ and ☿ is so spiritual, volatile, and fugacious, that like a Bird it presently flies away, and leaves an empty Nest; the truth of which thing I have experienced. *He that will not believe what I say, let him try, and he will find it to be true.*

But that I may shew the studious of the Hermetick Medicine how he may experience this matter, I will declare by what chance I my self came to know it.

At a certain time, when I had taken the *anima* of Gold and Mercury, made by the Fulmen of *Jove*, out of the Receivers, not clearing one Receiver so well, but that somewhat of the *anima* remained therein; I put in some ounces of Water, that I might thereby the better wash out the remaining Flowers: In the mean time, some more urgent business called me away, I set the Receiver with the Water in it, upon a Table in my Laboratory, before or near a Window, and forgetting it, left it there for some daies; the Cold being then very sharp, in that time had frozen all into Ice; I coming into my Laboratory, to see if some Glasses, in which were Water, were not broken by the Ice, as is usual,

I found

I found ſome wholly filled with Ice, and ſeeing this Receiver to lie there, I preſently believed that Receiver to be broken by the Froſt; but taking it up in my hand, I found that the Water in it was not frozen, but remained clear, therefore I rejoiced that the Glaſs remained unhurt, and wondered much whence it ſhould proceed; but I could impute it to no other thing, but to the hot ſpirit of Gold and Mercury, of which notwithſtanding there could not above three or four grains remain in the Glaſs, which although ſo very little, preſerved ſome ounces of Water from freezing. From that time weighing the matter more diligently, I found an incredible heat in that *Anima*. Let others enquire and ſearch what may be performed by ſuch a heat; this I know, that hereafter there will be ſedulous Artiſts, who will thank me for this my faithful Inſtitution.

For it is very likely, that this ſubtile and fiery Spirit of Gold and Mercury, ſuch as it yet is before fixation, may be preſently uſed with great profit, in the taking away many occult Diſeaſes of the Body. Moreover, it is to be obſerved, That if Metals, whether Gold, Silver, or Copper be to be conjoined by amalgamation with Tin and Argent-vive, they ought firſt to be reduced into pure and ſhining Calces, that they may be the more readily received by the Mercury: But only a fourth or ſixth part of the Calx is to be added in the Amalgamation, leſt the Tin (by too great a quantity of the Calx) be hindered in fulminating, for the whole operation conſiſteth in a right fulmination. But leſt any ſhould erre in working, he may firſt make trial, whether all things be well mixed and prepared, by putting half a dram of the mixture into a ſmall Crucible, and upon that a live Coal, and beholding the Fulmen with an intent eye, that he may ſee what colour it gives: If it riſeth ſo white and clear, that it dazleth the eyes, as the looking upon the Sun is wont to do, all things are rightly and orderly mixt; the ſmoak is tinged with the colour of the adjoined Metal, as Purple from Gold, Blue from Silver, Green from Copper, but Tin and Argent-vive only give White. Alſo from the Maſs remaining in the Crucible, it may be ſeen whether the Fulmen be rightly performed, *viz.* if the *Caput Mort.* or reſiding Maſs be porous, and fiery upon the Tongue, being touched therewith. The Colours alſo of that Maſs are various, according to the added Metal; Tin and Argent-vive alone leave a fiery white matter.

NB Neither is this to be paſſed by, being of no ſmall moment, *viz.* If you ſeek not a Medicine, but only the emendation of Metals, it is not neceſſary to add Mercury with the Metals, but the Gold, Silver, or Copper may be melted with Tin, for ſo they become a brittle Maſs, which may be powdered in a Mortar, and mixed with an equal weight, or a little more, of Salt petre, and put into a ſtrong Crucible, and covered, then put into a circular fire, ſo that the fire may approach it by degrees, till the Crucible and Matter be hot, and at length taking flame, may be enkindled and diſperſed. In which operation many Flowers flie away, and a fiery Maſs remaineth in the bottom, which is again to be reduced into a metallick body in a ſtrong Crucible, in a Wind-Furnace, by the addition of ſome combuſtible ſulphur, and after the reduction, to be reduced again into powder, and mixed with freſh Nitre, and again treated in the ſame manner, by ſometimes repeating the former Labour. At length that Maſs being reduced in a Crucible, the Gold, Silver, or Copper will be found augmented by the Tin.

NB. Becauſe in this operation, not a little of the Metals flies away in fume, the Crucible may be ſet in ſome Wall, and on the Wall over it ſome Veſſels or ſubliming Pots capacious enough may be faſtened over it, that the Metals being kindled by the Fulmen, the elevated Flowers may be preſerved and advanced to a purer Metal than they were before. This Labour doth not differ much from the Operation of *Baſilius*, in which Salt-petre ſaith, *My Lover is a cheerful or pleaſant Woman*, &c.

There are only two feminine Metals, *viz.* *Luna* and *Venus*, either of which ſerveth to this Labour, yet this is more profitable than that, yea, and the ſame Labour giveth an augment to Sol, Mars, and Saturn, which are not feminine. When Tin is melted with ♀ or ☽, theſe pleaſant females are elevated with joy, they ſing, dance, and ſuffer themſelves to be handled in what manner ſoever it ſhall pleaſe one to treat them, therefore they are called *brisk or pleaſant Women*. This is an Operation not to be contemned, foraſmuch as it well compenſateth the Labour, and requireth but ſmall coſts beſides the *Salt-Petre*, and alſo may be wrought in a great quantity, but our former with Mercury is better. There is yet more lies hid in this operation, but I think it not neceſſary here to recount all things. Let the Reader kindly accept of this, and ſhortly (God willing) more and better ſhall follow.

Whatſoever I have here written, is the very truth, and confirmed by many Experiments, in which every one may ſafely confide, and if he operates aright, will find the truth; for all things here delivered, are to be underſtood according to the Letter, and ſo to be obſerved in all the Labours.

NB

A

TREATISE

Of an Universal Medicine;

OR,

A True Aurum Potabile.

Being an accurate Description of a True Universal Medicine, and of its admirable Virtue and Efficacy which it sheweth upon the *Vegetables*, *Animals*, and *Minerals*. A Gift presented unto all such Noblemen as are desirous to preserve their Health, and to attain to a Long Life; it being an *Universal Medicine*, or *A True Aurum Potabile*.

AFter that I had by GOD'S assistance described three excellent Processes in the Continuation of the Miraculum Mundi, *and had bestowed the same on men of several orders, that thereby they might the easilier, and with a safer Conscience, provide themselves with Food and Raiment: I was also desirous of tendering some small Present to Noblemen too, and such who are of eminent power and authority, and whom I had not forgotten to present with some Gift, which may serve for the preservation of their good health for a long time, and for the restauration of it when lost.*

For it is a thing of the greatest Concernment for the Nobles, and such men as are placed in the degree of Power and Authority, to have the fruition of bodily health, whereby they may wisely rule over the subjects committed unto them by God, and may use a sound mind about the defence of the Good, and the punishment of the Ungodly. Now a sound mind inhabiting in a sound body, doth proceed (next after the Divine Grace) out of a sound Heart and Brain. And it cannot be, that a publick Government can be rightly and well administred without a good Health; and this is as clear and evident as the noonday light is. Forasmuch therefore as the safety and preservation of all Kingdoms and Republicks is placed in the Wisdom of their Rulers and Magistrates, and that imprudence and ignorance of the Rulers is wont to ruin their Subjects, it is a thing of the highest consequence to save the Head of the whole Kingdom or Country sound, whole, cheerful, prudent and ingenious, and that he be not made unfit or uncapable for the Government, by diseases, sadness, slothfulness, and stupidity. Therefore the love of my Neighbour constrains me to publish this Universal Medicine for the sake of the Great ones of the World, seeing it is so much conducive to the perpetual felicity and happiness of a sound and good Government; for no man can be said to be a sound man, if he be not of a sound constitution of Body. What benefit, I pray, can a sick man bring to himself, or to other men? Verily none at all, but is rather an hindrance and detriment both to himself, and unto others likewise: For when the Head is ill, there are a great many Members must serve it; but if the Head be sound and well, it exerciseth the governance of the whole Body very happily.

What profit has a man that is tormented with Sicknesses and Dolours, of all his vast Wealth and Riches, since he can neither use them nor enjoy them, looking upon them with a kind of nauseate, and at last leaving them with grief behind. Certainly a sound body is to be preferred far before all the Treasures of this World, and no body will gain-say this. He is to be judged the Happiest man, that possesseth those two the greatest Gifts of God, viz. *good Health and Riches. Sickness and Poverty are to be esteemed worse than even Death it self.*

We sometimes see, that pious Magistrates and Governours are snatcht away, and killed with small Diseases, which otherwise might have yet Ruled very many years over their subjects, had they had but good Medicaments, by help whereof they might have been succoured.

As for the way of Conserving good Health, and recovering it when lost, this little Book doth most exactly shew the same, which I commend unto all those who are desirous of its preservation.

Of

Of a Universal Medicine, OR, AURUM POTABILE.

THE Medicine that is honoured with the Title of *Universal* must be of this property, *viz.* to operate universally upon the three Kingdoms, *viz.* the Vegetable, Animal, and the Mineral, and to be able to succour each of them, as a most high Medicine should do. Whatsoever now does not abound with such an excellent property, the Title of *Universal* is falsly attributed unto it; nor is it worthy such a Noble Name.

Therefore it doth, in the first place, behove me really, and in very deed, to demonstrate in this Book which treats of such a Universal medicine, that this same medicine which is so intituled, doth also possess those very same virtues and properties which a Universal medicine ought to have. And farther, Such a Universal medicine ought not only to be a most friendly Auxiliary and Helper, universally, to those three Kingdoms, *viz.* the Vegetable, Animal, and Mineral, but it is likewise necessary that it be also preparable out of all those three Kingdoms, Vegetable, Animal, and Mineral, and that too out of each apart, without the addition of any peregrine thing, and without any great labour, for the benefit and profit as well of the Poor as of the Rich.

They therefore do extreamly erre who are of such a foolish opinion, as to Dream that the matter of the universal medicine is only produced in such or such a place, and is to be fetch'd out of this or that Country with a great deal of Labour and Charges.

This opinion is Diametrically opposite to the common Vogue and Saying of all true Philosophers, who do unanimously confess, that their matter is every where to be found, and every one has it, and it is in the possession both of the Poor and of the Rich: And this verily is so open and evident a Saying, that nothing can be spoken more apparently.

For my part, I do affirm, that this Art is Vegetable, Animal, and Mineral, and that there is not a man to be found in the whole World, that has not the knowledge of this universal matter, and that does not use the same. Yea more, I do also affirm, that even a new-born Infant cannot live without it.

I have already accurately demonstrated in many places of the Writings I have hitherto published, that Nitre is found in all the things of the whole World; and so not only in all Vegetables, Animals, and Minerals, but also in the very Elements themselves, *viz.* in the Earth, in the Water, in the Air, in the Fire: And for this reason it both may, and deservedly ought to be called a Universal matter; for without the Elements can no man live. And now, whether any one believes this which I here mention, or does not credit it, 'tis all a case to me, what I have said I have said, nor need I say more. And thus much let suffice concerning the universal matter.

The Preparation I have openly enough treated of in many places of my Writings, but especially in my *Miraculum Mundi*, and in the other Writings thereunto appertaining; and therefore I forbear to make any more prolix declaration, and to multiply any more words about it.

But yet notwithstanding, I do here adjoin thus much, and confess, that although I have several times prepared that universal medicine, yet the Preparation thereof has not at all times answered my desires; nor hath it as yet been ever brought by me unto the utmost perfection and fixation, because I have wanted both time and opportunity of accomplishing it, and many other Impediments have hindered me from compassing the same according to my mind. But as concerning what Progress I have therein made, and that I can as yet perform or finish the same in three daies time; this, I say, I will consecrate to eternal memory, and in no case hold my peace, but speak on, for the instructions sake of Posterity.

And this I do to this end, that the omnipotence and bounty of God may be the more manifest, and that His Divine Name may be honoured the more, and that many Thousands of Sick people may be succoured with a most present and speedy Remedy.

This is the only cause that stirred me up to make this Discourse of the universal medicine; for I neither would, nor indeed ought I to burthen my Conscience by the concealment thereof, nor to hide and bury with me in my Grave, such a noble Gift of God, and the Talent which of His Gracious Benignity He hath been pleased to bestow upon me.

But yet I would not that any one should perswade himself that he shall (by his soothing words and large promises of golden mountains) squeeze out from me the Preparation of the same, whereby he may make use thereof to lead his Life in Pleasures, Pride, and Impiety, and so hurt poor mankind. No, let such an one be assured, that I will never do so, for it is not in my power to reveal to every one such a great Gift, and which is of God, and not of Man, but 'tis in the power of God alone so to do: And as for my self, I would much rather die, than to reveal and prostitute it to a wicked man. Besides, I would not have any one to suppose, that whereas I call this medicine of mine Universal, it is therefore able to transmute the Imperfect metals into Gold, so as to furnish one with such vast Treasures as the Philosophers attribute unto their universal medicine: No, for I am as yet ignorant of such a transmutation, nor indeed do I covet it, or gape thereafter, but give unto God only most great Thanks for that medicine, by which (being vouchsafed me of His meer bounty) I am able to succour the miserable, sick, tormented, and diseased ones, and celebrate the glory and benignity of the Lord. I do withal readily confess, that I have not as hitherto received any benefit at all therefrom about the bet-

tering of the Metals thereby ; nor do I at all seek after any benefits in that kind of way, being contented with that Medicine, advanced to such a pass, as whereby it may be able to suffice me to get Food and Raiment by God's help. I covet not after abundance of Riches, and do only beg of God, that He would neither afflict me with Poverty and Want, nor bestow on me too much Satiety and Fulness, lest I should be lifted up with Pride, and say, *Who is the Lord ?* Nay verily, if I could with this Medicine get my self great benefit, as to the metallick affairs, yet would I not do it, nor would I lay out such a great Gift of God, upon temporary things, thereby to rob the poor, miserable, sick people of the same, for whose sake God was pleased to bestow it.

Perhaps it may so come to pass, that this my Medicine may, by the labour of diligent searchers, be brought to such a pass, as to be capable of exercising its power upon the lesser and imperfect metals, and that by a fruitful or profitable amending and correcting them: But this is a thing that God reserves to Himself, as posited in His alone good pleasure, whose Grace and Favour we must with a patient expectation wait for: Mean while we may lawfully enjoy this most excellent medicine, which being a most certain Argument of the verity and power, arising from such a notable Art, doth abundantly serve to stop the shameless mouths, and break the mischievous Teeth of all *Farnnerian* Asses. But yet notwithstanding some or other of them may haply spue out some poisonous stuff out of his shameless mouth, and say, With what right can I impose the name of *Universal Medicine* upon this Medicine of mine, seeing that I do not in the least deny, that it is not available to bring me any benefit out of the metals, but can only heal the Diseases of the Sick: Whereas the Philosophers do on the contrary attest, that their Universal medicine hath such virtues as are wont to transmute the lesser or meaner metals into Gold, and that with most exceeding profit.

For answer to such as these, I say, that although this medicine of mine which is here treated of, hath not hitherto brought me any profit by the melioration of the metals, yet it demonstrates it self to be universal, and to be worthy that fame Title; for I have been hindered through want of time and other letts (as I said afore) from hitherto bringing it unto perfection and fixation. And I pray who can tell what God will be pleased to vouchsafe in process of time. A new-born Infant cannot well be upbraided (if wanting wit and judgment it does not attempt and effect some great matters) and be on this wise twitted. Ho! it is not a man, 'tis beardless, it understands nothing, it lies along and cannot help it self, it has nothing but what they reach out unto it. Well, well, let the Infant but arrive unto its due age, and let its due meat and drink be administred unto it, and then in length of time it will attain to a requisite stature and strength, and will propagate and multiply its own kind. For if there be but once the humane form, there will not proceed ought else thencefrom, but a perfect man. Just so stands the case with my medicine, which is exceeding like to a new-born Infant, whereto regard being had, according to a Philosophical manner, there will be no doubt, but that it will arrive unto a due perfection.

And now, the things which it doth even already perform, do all of them sufficiently argue and testifie, that process of time both can & indeed must produce thereout of some better thing; even as a good Parent wisheth for nothing more, than that (whilst himself is living) his Children may grow up to man's estate, and be happily married, and by a new Offspring preserve his Name and Stock, and yield their help towards the multiplication of mankind, and he himself is wondrously joyed in his Grandchildren: But yet in the mean while he cannot be at all certain that his Life shall be so long prorogued, as to have a fruition of so much happiness, and therefore must commit the whole affair to God's pleasure, and patiently wait upon him, and see what that Omnipotent Creator (who indeed shewed unto *Moses* the Promised Land, but granted him not so long Life as to enter thereinto) will do with him and his; even so hath the Lord shewed unto me the Promised Land, but whether or no I am worthy to arrive so far as to enjoy the pleasant Fruits thereof, GOD only knows; His merciful bounty hath bestowed upon me in my old Age a Philosophical Infant, which doth exceedingly rejoice me: But yet verily am I utterly ignorant whether or no He will vouchsafe unto me so long a Life, as to see the virile or man-like age thereof.

Therefore, like as a Father, unto whom in his old Age the Divine Bounty hath vouchsafed an Heir, tho' (haply) he well knows that the said Heir cannot possibly arrive unto man's estate, during his (*viz.* the Father's) life, yet nevertheless he is exceedingly joyed, in that he hath an Heir to keep up his Name, and which will in time trace his Father's footsteps (*viz.* have more Children): Even just so doth my new-born Philosophical Infant exceedingly rejoice me, though haply I know that my Life will not last so long, as to be a Possessor of the same, in the state of its being advanced unto perfection. However, I doubt not but that God will stir up other nursing Fathers to this tender Infant, that being educated and nourished by them, it may arrive unto a Man-like strength, and unto virile powers and virtues, and may become serviceable to the advancement of the Honour of God, and to the succouring of many Thousands of sick People. The way of attaining this, I have, according to my simple judgment, too and agen, and peicemeal as it were, opened and revealed in divers places of my Work, *viz.* how it may be most commodiously effected, and therefore I judge it needless to treat thereof any farther in this place.

Of the Nature, Form, Properties, and admirable Virtue and Efficacy of my True Aurum Potabile.

AS touching the form of this same new-born Infant, I would have the well-minded Reader know, that it is like unto a poor, naked, tender Babe, of no splendour, of a simple aspect, but yet carries within it self all the colours of the whole World, which by how much the older it grows, so much the fairer colours doth it yield. The Fire affords it nutriment, and clothes it with Garments of various colours, and makes it strong, fair, noble, and potent, insomuch that it may not undeservedly be termed its Father. Being born out of the Earth its Mother, it loves

loves it, and uſeth it for its nutriment, until that arriving unto full years, it becomes like its Father the Fire, and leaves its Mother the Earth, and like a Lord of full age, bears rule over its Hereditary Poſſeſſions. But during its Minority and Infancy, all its actions are look'd on as childiſh, but yet ſo that preſently (or even now) appears what kind of notable man he will be, making good that Proverb; *Urit mature quod vult urtica manere.*

That which will a Nettle be,
Stings betimes, truſt you me.

For ſeeing that a new-born Infant doth abound with ſo much virtue, as to be able to do ſo much good, What would not he be capable of effecting, ſhould he attain to a ripeneſs of years? It will be therefore worth while to hear and ſee what virtues it is able to exerciſe upon Vegetables, Animals, and Minerals; and firſt, we will treat about the Vegetables.

By what way a Trial is to be made, whether or no this Aurum Potabile, *or* Aqua-vitæ of the Philoſophers, *be a moſt high Medicine for the Vegetables.*

EVery body knows, that the Vegetables which are to grow up, and be multiplied, muſt be alſo nouriſhed. This nouriſhment now is nothing elſe but a ſulphureous Salt, whether it hath its Riſe from the Vegetables, or from the Animals, or from the Minerals; for 'tis all a caſe to the Vegetables, from whatſoever it proceeds, ſo that they have but their nutriment, by which they may grow, be encreaſed, and be multiplied. The Husband-man uſeth the Dung of any Cattel or Sheep, to dung his Lands withal, that the Seed ſown in the dunged Earth, may thence extract the Salt, and convert it into its own nutriment, and ſo grow up, and be encreaſed; and beſides this kind of Dunging he knows none.

But the true Naturaliſt makes uſe of the Excrements of other Animals, yea, and the Minerals themſelves too, for the dunging of the Ground; concerning which thing, I have written at large in my other Writings, and eſpecially in my *Miraculum Mundi*; and therefore there's no need at all of making any farther repetition of the ſame here. Foraſmuch therefore as my *Aurum Potabile* is alſo a ſulphureous Salt, but yet far ſtronger, and more efficacious than that which lies in the common Dung of Beaſts and Cattel, and ſo conſequently promotes the accretion or growth, and multiplication of all the Vegetables in a wonderful maner. I have judged it a thing worth while to ſet down in this place the uſe thereof in the melioration of the Vegetables, that ſo it may be evidently demonſtrated, that this my Potable Gold is the moſt excellent Medicine for all the Vegetables, and that their *Particular* Medicine which doth firſt proceed from the Dung of Sheep and Cattel, doth afterwards diſplay its virtues by an *Univerſal* operation. For if the *Dung* of Horſes, Cows, and Sheep (as 'tis barely Dung) could but ſuccour Men and Metals, like as it brings a medical or helping ſuccour unto the Vegetables, then might it by the ſame reaſon be likewiſe called *Univerſal.*

But whereas it is an helper to the Vegetables only, and hath no conjoining familiarity with the Minerals and Animals, therefore is it rightly and deſervedly to be referred to the order of particular Medicines, which are helpful to the Vegetables only. But yet notwithſtanding, the Salt being extracted out of thoſe ſorts of Dung, and converted into Salt-petre, (which is a thing eaſily done) doth then admit of being tranſmuted into a *Univerſal Medicine*: But now, afore ſuch a Tranſmutation be made, it does not exceed the order or bounds of *Particular* Medicaments. But this *Aurum Potabile* of mine merits the name of a true Univerſal Medicine, as being not only a moſt high Medicine for the Vegetables, but alſo for the Animals and Minerals too, and this ſhall be perfectly demonſtrated as follows.

You muſt get ſome Veſſels made of the beſt Earth, and ſtrong, and ſuch as being well burnt in the Fire, become like a Stone. And amongſt ſuch Earths, the *Colen*, *Siburg*, *Waldenberg*, and other ſuch-like natured Earths, are the fitteſt for this Work; let them be made very thick, and ſuch as will not imbibe any Water. If you want ſuch as theſe, cauſe then your Veſſels to be made of Glaſs; for every porous kind of Earth, though it be glazed over with Lead-glaſs, yet it is not ſo fit for this kind of operation; therefore you muſt of neceſſity provide your ſelf with fit and convenient Veſſels, and have a moſt eſpecial regard to this admonition. Let ſuch a Veſſel be a ſpan long, or high, or deep, and let it have the ſame breadth or largeneſs, and let its bottom be perforated with ſome ſmall holes, like as thoſe Pots which are made for the keeping of Flowers in are wont to be: The Pots being thus prepared and filled up top-full, with clear and lean Sand, you may put or plant therein three or four Seeds of ſuch Herbs that you have a mind to plant, that ſo if haply one of them comes not to good, the ſecond, third, or fourth may. When the ſeeds are on this wiſe put in the ſaid Sand, and ſhall have been moiſtened with our Univerſal Water, the Pots muſt then be ſet abroad to the Sun and Air, that ſo the Seeds may ſpring up and grow; which ſeeds, if good, and not too old, will in a few daies time, grow up out of the Sand, as if they had been in any other fat Earth. Now, when they ſhall have ſprouted up ſo high as a fingers length, you muſt leave in your ſaid Pots two of the biggeſt and ſtrongeſt ſtalks or ſprouts, and pluck up the others, leſt they ſhould impede each others growth; and you muſt let them have room enough in the Pot to grow.

This Veſſel thus filled with ſand, and planted with ſeeds, is to be ſet upon another ſtrong Diſh or Platter, and which is made of the like ſort of Stone-like Earth, that ſo if that medicinal water ſhould happen to penetrate and deſtil through the ſand, it may not be loſt, but being ſaved, may be again poured into the pot-full of ſand. Moreover, you muſt diligently take heed that no Rain-water fall therein and waſh away that medicinal water, and ſo take from the Herbs their nutriment. The ſand muſt not be too much wetted, but lie alwaies ſomewhat moiſt, leſt by being quite dry, or too wet, the whole Work be corrupted by either the exceſs or defect of the due temperament: All things here preſcribed being duly obſerved, the Herb ſprings up in a ſhort time, and bears Flowers and Fruits ſooner and better, than if it had grown in other dunged Earth. The Colours become fairer, the Odours will be ſtronger, the Virtues alſo will be greater, and theſe Herbs do likewiſe lon-

ger keep their virtues, and are not so corruptible as others are. After that all the humidity which you poured first on, shall have been consumed by the Sun and the Air, so as that it is plainly vanisht, there must some other Rain-water (wherein a little of that potable Gold shall have been dissolved) be again poured on upon the Sand, that so the Herb may have its due supply of nourishment, so long as it shall be a-growing, for the whole World knows, that there does not grow ought at all out of sand, which is only wetted with bare Rain-water.

Likewise by the help of this Universal Medicine all kinds of Herbs and Plants may be made apt to germinate and grow even in mid-Winter, and may be at any time amended, if so be that dissolved Liquor be but poured on upon the Roots. So will they be sooner ripe, and yield their Flowers and Fruits much speedier than those that are dunged after the common way; yea, and more too. I say, that as to their virtues and efficacy, they are to be preferred far before the common ones. The bare simple Universal Medicine is wont to shew so much efficacy, as is here mentioned: But now some metallick Ferment being added thereunto, makes it far more efficacious; for by means thereof, the Herbs acquire greater and better virtues.

If there be adjoined thereunto an aureous ferment, the Herbs will not only get the virtues of the Gold, but will also appear spotted here and there, in their Leaves and Flowers, with golden spots like little Stars, and will wonderfully please the sight by their delicate aspect.

If a Silver Ferment be thereto added, the Herbs will be impregnated with Silvery virtues, and be painted with silver spots as they grow. The Herbs being by this means bettered with a golden Ferment for the Heart, and with a Silver Ferment for the Brain, do with a more admirable efficacy succour those Members. And if the great ones of the World did for their Health's sake take care for the nourishing such Herbs as these in their Gardens, there's no doubt at all to be made, but that they would thencefrom obtain most great benefits. For, besides their wonderfully delighting the sight with their beauty and delicateness, and besides their admirable virtues, in which they far excel the common Herbs, they do likewise bring this exceeding great profit, *viz.* they may be made use of instead of my *Aurum Potabile*, which perhaps some great men may be averse from taking, through the perswasions of their ignorant Physicians, who most-an-end do, by reason of their sottish stupidity and ignorance, snarle and bite at such kind of eminent Medicines, and divert their Lords and Masters from the using of them, as if they were so many Poisons.

If therefore (to free themselves from that needless care) they did but make use of these Herbs instead of my Potable Gold, they would however, by the help of such Vegetables, enjoy so much of the efficacy of my Potable Gold, as to keep themselves in good Health, or to recover it, being lost.

Besides too, the said Potable Gold may be most commodiously and fitly applied to the use of Mankind, not only by the help of the Vegetables, but also of the Animals too, and that on this wise.

Hens (or Pullets, *&c.*) are to be a while nourished with Oats, Barley, Wheat, or other kind of Grain, macerated with the Liquor of that Universal Medicine; and being nourished therewithal, they will by concoction or digestion transmute those Medicinal Virtues into their Flesh, and so be far more efficacious and nobler than the flesh of other Hens or Poultry. The Dung likewise of such Fowls may be saved, and mixt with Sand, and Herbs be therein planted, which by this means will be rendered better than the common Herbs, because they assume to themselves the Reliques of that Liquor which the Fowls did not consume, and by digestion transmute into their Flesh, and so do convert it into their proper juice, so that there is not any thing at all of that Liquor lost, but the whole of it passeth into most notable profit.

Verily this is an excellent and admirable Transplantation of an Universal Medicine, into the Vegetables and Animals, the which the tender great ones of the World may make use of with the greatest security.

Such now as these (*viz.* the great ones) seeing that this Universal Medicine of mine doth not at all hurt the tender seeds of Herbs, or the young Pullen, but rather bestows on them a greater efficacy and strength, will doubtlesly be induced to believe and understand thus much, *viz.* that this same Medicine will in no case prove hurtful unto Men, who as to tenderness, cannot be like the seeds of Herbs, or like tender Pullen.

If this Medicine be of so great an efficacy as to be capable of transmuting some venenate Mineral, such as Mercury is, into true Gold, and that in a few hours space, as we shall see and hear by and by, it must necessarily follow, that it is not infected with any malignity or venom, for the malignity of one thing does not amend or correct the malignity of another thing, but rather makes it worser.

From hence it is apparently manifest, that that Potable Gold does not at all partake of any malignity, but is a most wholsome Medicine for both Vegetables, Animals, and Minerals: Which thing, if any one will not give credit unto, or shall not be capable to understand the same, I know not what other help to afford him; for minding my own affairs, I have propounded and set down all things out of a good and sincere mind; if so be that any one hath ought that is better, let him produce it out-right, and not despise those things which he does not understand, lest haply he hazardeth his good name, as that convicted Lyar *Farmer* hath done, and be derided, and made a laughing-stock to the common People.

But *Farmer's* setting upon me with his calumnies and slanders, hath ministred unto me an occasion of answering, and of defending my self: Upon this occasion of my replying, there have sprung up, and come forth to the Light most excellent Secrets and *Arcana's* of Nature. Surely I should never have so openly published my knowledge in natural things, but should have lain hidden in quiet, had not that Blood-sucker and secret Murtherer thrown me out of my tranquility by his venomous biting.

But that it may not seem a thing strange and absurd, that I write, that this *Aurum Potabile* of mine doth induce into the growing Herbs a golden Nature, it seems a thing expedient unto me, to confirm the business by some true Histories.

In the *Hungarian* and *Transylvanian* Chronicles, it is mentioned, That in those Countries, in which the soil or ground hath every where about in the Mountains, an aureous or golden nature, and from whence, for this Thousand years, even to this very day, much Gold hath been, and yearly is digged out by the Gold-

Miners,

Miners, and been molten, and coined into Moneys, there have been oft-times found ſuch Vines, as have not only had their Leaves, but alſo the Grapes too gilded over, as it were, with Gold, juſt as if they had been artificially gilt. Nor is this an old Wife's Fable, but a thing moſt certainly true, and which many have affirmed unto me for a moſt undoubted Truth, ſome of which Perſons have had their Habitations in thoſe places, and otherſome of them do even live there at this day. About ſome ſix years ſince, when I lived in *Franconia*, it chanced, that a Vine to whoſe Roots I laid Gold opened, and reduced into its firſt Ens, produced Bunches of Grapes, whoſe Stones were gilded: Which Story I have mentioned more at large in the Conſolation of Navigators. And but very lately a certain Nobleman of *Hungary*, told me for a moſt certain Truth, that not far from *Cremnitz*, being one of the Mountain Cities of *Hungaria*, a certain Husbandman found in his Vineyard a piece of corporeal Gold, above an Ell long, grown out of a Stone, and twined round about the ſaid Stone, a little piece of which was given me by the ſaid Nobleman, becauſe of the Novelty and Wonders ſake.

But put caſe that this were not true, which notwithſtanding is very true and indubitable, as being a thing known to the whole World, that ſuch gilded Grapes are often found in *Hungaria* and *Tranſylvania*; yet however, thoſe things that I have mentioned, and attributed unto my Potable Gold, are moſt aſſuredly true.

Nor can I alleadge any other cauſe for theſe gilded Grapes and Leaves in *Hungaria*, but this, that the Earth there is impregnated with golden vapours, or with the not yet hardened and coagulated firſt Ens of Gold, and that aureous water being mixt with the Rain-water, inſinuates it ſelf into the Roots and from thence aſcends up into the Boughs and Grapes, and in them manifeſts it ſelf, and becomes viſible.

Even thus alſo is it with my *Aurum Potabile*, (which is like to a ſpiritual Gold) if it be diſſolved with common Rain-water, and be therewithal commixt, and the ſand (in which the ſeeds of the Vegetables were ſown) be moiſtened with that Liquor, the nutriment is attracted out of the ſand by the Vegetable Herbs, and being attracted, renders them partakers of an aureous nature: And this experience teſtifies to be a thing moſt true; nor can it be otherwiſe.

By theſe few things here ſpoken, every body (as I ſuppoſe) will ſufficiently enough perceive, that my *Aurum Potabile* is a moſt high Medicine for the Vegetables. Now we will likewiſe prove by ſome few but yet clear and convincing Arguments, that it is a moſt high Medicine for the Minerals too.

the poſſibility thereof, both in the moiſt and in the dry way.

In the firſt place, it is behoveful for every one to know, that the ſaid *Aurum Potabile*, when brought to its due perfection, and ſuch as my ſelf know, hath the reſemblance of a bright and clear water, is of a burning, hot, and fiery taſte upon the tongue, and gives out a ſulphureous, but yet pleaſant odour.

But ſome may ſay, What can any ſuch virtues be in a clear Water? What reaſon have you to call it Potable Gold, for that ought to be yellow or red? To ſuch an one I anſwer, That in the whiteneſs is a redneſs hidden, which is not diſcernable in its tender Infancy; but when by the help of the Fire it arrives to a greater age, then it diſcovers it ſelf, and ſhews forth its comelineſs and excellency together with moſt eminent ſtrength and efficacy: For thus ſay the Philoſophers, *Unleſs you make our Gold white, you cannot make it red.* And in another place, *If any one knows how to deſtroy Gold, ſo as it ſhall be Gold no more, he hath arrived to a moſt great Secret.* And again, in another place, *Our Gold is not common Gold, but Gold potential, not formal (or Gold in power, not in ſhape).* Such Sayings and Sentences the whole Troop of the Philoſophers is full of; by which it is exactly demonſtrated, that the true *Aurum Potabile* ought not to be preſently red, as to the outward view, but that it merits this Title, if there be but only that golden and red virtue and efficacy lying hidden in its internal principle. For if this whiteneſs did not cover over an hidden redneſs, it could never poſſibly become red. Now my *Aurum Potabile* being coagulated by the means of fire, and reduced to a ſtability in the fire, is turned into a ſtone of a blood-red colour, and yields not in the melting any corporeal Gold, unleſs a metallick body be adjoined unto it, into which the Spiritual and Philoſophical Gold, betakes it ſelf, that ſo cloathing it ſelf with a body, it may become Corporeal.

This potable Gold of mine is, *Lac Virginis*, or the *Virgins Milk*, which is coagulated with a ſmall heat. This *Coagulum* paſſeth into (or becomes) the *Dragons-blood*, which being coagulated, muſt neceſſarily yield the conſtant or durable *Salamander*. I confeſs, that hitherto I have not prepared it; nor had I any opportunity to prepare it, but remain contented with my *Lac Virginis*, as with a moſt excellent Univerſal Medicine, patiently expecting what the Divine Grace will in time to come beſtow upon me.

But that I may proceed on to ſhew that my *Aurum Potabile* doth likewiſe heal the Minerals, amend them, and make them golden, I will here ſet down ſome waies of doing the ſame both in the dry, and in the moiſt way.

Of the Uſe of my Aurum Potabile *in the melioration of the* Minerals.

AS concerning the bettering of the Minerals by my Potable Gold, thus ſtands the caſe: It is capable of exhibiting to thoſe that are inquiſitive after the tranſmutation of the Metals, and would make trial of the ſame, ſome moſt exact proofs of

The manner of trying (by the moiſt way) whether or no my Aurum Potabile *be a true Philoſophical Volatile Gold.*

TAke of my potable Gold ʒ j. and ℈ j. or ʒ ſs. of common Quick-ſilver, put them into a ſtrong Glaſs, and ſo ſmall, as that it may be half full with this matter. (NB. The glaſs muſt have a round

bottom, whether it be a piece of some small Bolt-head, or of some small Phial, that so the Mercury may gather it self into one Ball in the bottom) and place your glass, with the potable Gold and Quick-silver, in Sand, to the heighth of the Liquor, then heat it, and leave it for about one hour in a sufficient heat, that the Phlegm being exhaled, the potable gold may stay behind in the form of a white Salt: This done, pour agen upon that Salt so much Rain-water as it evaporated in the boiling, or fill the glass so full with Rain-water, as it was before full of the *Aurum Potabile*, that so lying a while upon the said Salt, it may dissolve it, which is hereby again turned into the same potable Gold, having the same colour, the same taste, and the same virtues as it had before. The Mercury being freed from the said potable Gold, which is to be poured off, is found to be hard, and fix in the bottom like the best gold, and of the same bigness or quantity, as when it was put into the glass. NB. If by some errour committed the *Argent-vive* be not enough tinged and brought to a due degree, but hath gotten some blackness, it is to be taken out of the glass, and put into some little Crucible, and to be heated red-hot with live Coals, that so it may receive the due golden colour; which said colour it will get, and will be like the best Duckat Gold, and will abide good and firm in all trials. But that *Aurum Potabile* which was used about the coagulation of the Quick-silver, may be often made use of about the same labour; but yet you are to note, that you alwaies take each time less and less Quick-silver to this operation, because the potable Gold doth in each of those successive labours lose by little and little its virtues.

This way of coagulating of Mercury may be likewise used about the coagulation of other Minerals and Metals, provided that the said metals be reduced into thin Plates or Leaves, and so put in; for being put in too thick, they cannot be totally digested in so short a time by the *Aurum Potabile*, into the due degree of Perfection, but remain (as their inside part) crude, and therefore an accurate regard is hereunto to be had. If this Labour be rightly done, the Metals will be throughly transmuted into pure and good Gold, and that of the same magnitude, figure, and form they were of when you put them in; but yet one metal is sooner transmuted, and more commodiously than another, according as it shall be of a nearer affinity unto gold. NB. If the Metal be not in a due manner proceeded withal, but be as yet black when it is taken out of the potable Gold, it is then to be well heated red-hot, that so it may get its golden colour. And if there be even yet any doubt left, let him put it in ♄, and purge it by the Cineritium, or the Cupel, that so he may be assured of having true gold, and may be freed from all kind of scruple and doubt; for neither ♄ nor ♁ will take away ought therefrom; which thing the proof it self will most clearly demonstrate.

The manner of making a Trial, by the dry way, concerning the Transmutation of the Imperfect Metals, by my Potable Gold.

TAke of my potable gold, or *Lac Virginis*, ℥ j. and put it in a glass dish; which done, and the dish placed in sand, evaporate all the humidity, until there remain about almost half an ounce of white Salt; put this Salt in a Crucible, with ☽ j. or ʒ ss. of the Plates of Silver, or Copper, or Iron, for Tin & Lead need not be laminated: Place your Crucible, together with the Salt and the Metal, amongst Wood-Coals, and the Salt will presently melt like Wax, and penetrate all the whole Metal, and transmute it into gold; and this operation is done in one quarter of an hour, or half an hour at the utmost. The molten Salt being poured forth out of the Crucible, you will find in the same Crucible the Plate of the Metal, of the same quantity and shape it was of when put in, and throughly transmuted into pure good gold. The Tin and the Lead will be molten into Granes, as being of easie fusion, which Granes will have the nature of pure good gold. If the Crucible should be too much heated with too intense a Fire, it may also happen, that even the ☽, Copper, and Iron too may melt into granes. And this I thought good to inform the Studious of.

These (O thou Lover of Arts) are the too Examens and Proofs of my potable gold, and of trying it both by the dry and the moist way, which if thou shalt rightly perform, thou shalt not erre from the mark. But now I must needs confess, that this Transmutation is not gainful, and I have already said before, that my divulging of all these things is only to this end, *viz.* visibly to shew the possibility of the Art. For although that the gold gotten by these proofs be true, and purely good, and passing all the usual Trials, yet nevertheless it brings no profit, because this *Aurum Potabile* requires so much expences, (afore it arrives unto this degree of power) as that the gold gotten by the benefit thereof, cannot countervail the same. Nay, if it should be somewhat profitable in this way, yet would that man do much amiss, that should waste away and imploy so kingly a Medicine for the getting of a little Gold, seeing there are other waies to get Gold by. And verily, it would be a great sin and shame for a man to consume such a most excellent and eminent Medicine for a little mony's sake. Neither is it for this end, that I have thus mentioned what I have here said, *viz.* to use it about the making of Gold; for my aim is only this, that all the world may see that there are men to be found, even at this very day, upon whom the Divine Grace hath bestowed the Art of preparing and making most excellent Medicaments. I do not envy, that other men should learn something out of my Writings, and take the opportunity of advancing this Work to a farther perfection: But I would not have the impious ones at all to perswade themselves that they shall obtain this Instrument to do evilly, and to exercise their wickedness by; God, who knows what He has to do, will not do those things which are (perhaps) liking and pleasing to our fancies. I can every hour demonstrate the truth of what I have written, with which demonstration I rest satisfied.

I can

I can eaſily conjecture that various men will paſs various cenſures upon my Writings, but this is what I am not able to prevent; nor indeed do I much care, but I do herein comfort my ſelf, in that I have written an undoubted Truth, and can defend it even before the whole World. I can withal readily gueſs, that ſome or other may object againſt me, and ſay as followeth, *viz.* That my Potable Gold is a bare ſolution of common Gold, which being adjoined unto the other Metals, is by them precipitated, and ſo reduced into its former body; and this cannot be ſaid to be a true tranſmutation of the Gold. To refel this objection therefore, I demand, Whether or no the common corporeal Gold can be diſſolved without ſome corroſive Liquor? For this *Aurum Potabile* of mine is void of all corroſion, and is a fiery water, moſt extreamly contrary unto all corroſives: Seeing it is nothing elſe but fixed Nitre, or a ſulphureous Salt, betwixt which Salts verily, and common Gold, there is no familiarity at all; nor are there any ſuch virtues therein, as to diſſolve the Gold: But put Caſe it could ſo be, that the body of common Gold ſhould be diſſolved with thoſe fixed Salts, and that by ſuch a Solution it ſhould diſſolve (or make) my *Aurum Potabile*, verily it would neceſſarily follow, that ſuch a ſolution of Gold would be of a yellow or red colour. But now 'tis not ſo with mine, for my *Aurum Potabile* is ſo clear and bright, as that it far exceeds the bright tranſparency of even Fountain-water it ſelf: Beſides too, the ſolution of corporeal Gold tingeth the hair, hands, and nails with a black colour; but on the contrary, my Potable Gold does not ſo at all, and therefore juſtly and deſervedly, it both may and ought to bear the Title of *Philoſophical Gold*; for all the Philoſophers that have been true Poſſeſſors of an Univerſal Medicine, do confeſs in expreſs words, *That their Gold, or the ſolution thereof, doth not at all colour the hands*, by which Character and Sign they diſtinguiſh betwixt the vulgar and philoſophical Gold.

From hence it neceſſarily follows, that my *Aurum Potabile* is prepared of the true Philoſophical Gold, ſeeing it does not tinge the hands with any colour.

But put caſe that a Solution of common Gold ſhould be made by the help of ſome *menſtruum* that is not corroſive, (but ſuch is not my ſolution) yet notwithſtanding, it would not throughly tinge the Imperfect Metals and common Quick-ſilver in digeſtion with them, and tranſmute them, but would cover over (as it were) their Superficies only with the colour of the precipitated Gold, like as is wont to be with all other ſolutions of Gold, and ſuch a powder performing the ſame effect, may be prepared of common gold; the way of the Preparation thereof I have delivered in my Writings. Silver being therewithal laid over, is as well gilt, as if it had been done with Gold and Quick-ſilver: The ſuperficies therefore is only gilded over, but the body of the Silver it ſelf is not at all tranſmuted, but abides in its former ſtate. So Gold diſſolved in ſpirit of Salt, doth, by the help of the Vitriol of Venus, gild over the Superficies of any Iron, but the Iron retains its Irony property and nature: If to ſuch a ſolution plenty of Water be poured, and *Argent-vive*, Tin, Lead, Iron, or *Biſmuth*, be put thereinto, the gold is wont to precipitate out of the corroſive water, in the form of a porous Sponge, and to adhere to the metal therein-to put. Now, as ſoon as ever the water is ſhook about, the precipitated gold diſperſeth it ſelf abroad in the water, like a troubled muddineſs, and the Metal is the ſame as it was before putting in, without any tranſmutation at all.

Moreover, if any Solution of common gold could tinge the whole body of the imperfect metals (but yet this can never be) it would neceſſarily gild over the external ſuperficies of the Metals, and eſpecially the external ſuperficies of pure Luna, when rubbed or ſmeared over with the ſame; and even this now my *Aurum Potabile* does not do; but if it be ſmeared upon Silver, it colours and paints it with all kinds of colours, and as infinite as appear in the Peacock's Tail, and in ſuch wiſe too, as that they cannot be eaſily rubbed out; and theſe Colours are an undoubted Argument, that this my *Aurum Potabile* is not the vulgar Gold, but the ſecret Gold of the Philoſophers.

All theſe, and other the like Objections, I could moſt eaſily prevent by due and fitting Anſwers, if they ſhould be objected againſt me; but I think no body will be ſo audacious, as (without producing any better things) to oppoſe himſelf againſt thoſe things which in the judgment of the whole World are accounted for good.

Of the Uſe of my True Aurum Potabile *in* Medicine.

TO what purpoſe ſhould I make many words of the moſt great Efficacy and Virtues of my Potable Gold in Medicine? I do not deem it a thing neceſſary to write a large Book concerning them, for ſuch kind of Writings do many times more hurt than good: For there is ſuch an odd cuſtom of Writing ſo prevalent, as that ſome men bluſh not oft-times to aſcribe ſuch great virtues to ſome coloured Brandy-wine, as can hardly be attributed even to *Aurum Potabile* it ſelf. I confeſs, that many times there lies more Virtue in ſome very vile mean thing, than in precious and ſumptuous Pearls.

But ſeeing that every one cannot diſcern the true from the falſe, and is conſtrained (on the contrary) to give credit unto thoſe things which he draws in by his Ears, it cannot poſſibly be, but that he erre from the Truth, and often chuſe the evil inſtead of the good; which defect is eaſily helped by making trial, and proving them, for this way is wont to try the Truth of things.

Should I but deſcribe in an accurate manner the Virtues of my Potable Gold, it would fill a large Volume: And this is not my intent in this place, but (God permitting) it ſhall ſhortly be effected in a little Book, wherein ſhall be comprized many other of my beſt Medicaments, and ſhall ſhortly come abroad under the Title of *Glauber's Pharmacopœia*: And in this place I will in few words hint out the Uſe of my *Aurum Potabile*.

Therefore, foraſmuch as my Potable Gold is (as I have already frequently repeated) a concentrated Fire, and reduced into a liquid form, and all its whole Eſſence may be ſaid to reſemble nothing elſe but ſome tender penetrating Fire, yet void of flame, every one may readily conjecture what it is helpful for, and what uſe it is of in Medicine.

Amongst all the Elements, the pureſt, ſubtileſt, moſt penetrative, and moſt efficacious, is Fire, and this is granted by every body; for the force of the Fire, *viz.* its heat penetrates even the moſt compact bodies, as Metals, and Glaſs; nor is there any thing that can ſtop its way; the Water, Earth, and Air are eaſily ſhut out. The Omnipotent God Himſelf is compared with Fire, from whom all things receive Spirit and Life, and without whom nothing can live or move it ſelf, for without him, all things are dead, hard, and cold; as appears in the bodies of men and other Animals, which being alive, are alwaies hot, but being dead, become more cold than any Ice.

Therefore, as long as that ſmall ſpark of Life in Man, and other Animals, is fed and nouriſhed with its due Food and Drink, ſo long alſo doth it attract its nutriment, and continues in its vigorouſneſs.

But as ſoon as it is deſtitute of its nutrition, and that it be taken thencefrom, the Life doth preſently begin to be debilitated, and to fade, like as a kindled Lamp, if Oil be not poured thereunto, doth at laſt go out, and extinguiſheth.

Seeing now that the Life of a Man is a meer fire, and is fed and ſuſtained by a ſuitable Food and Drink only, like to a Lamp, which (without the pouring on of Oil, and without Air, without which no fire can burn, nor any Life live) cannot conſerve its light. Some or other may demand, What the reaſon is, that ſuch men are ſo eaſily ſeized on by Diſeaſes, who have no want of the beſt Food and Drink, and which too is moſt fit for the ſuſtaining of Life? Hereto I anſwer, That in ſuch kind of men, the groſs, crude, tenacious, and cold humours do ſhut up the paſſage to the point and ſpark of Life, whereby it is deprived of the nutriment, being hereby kept back. For an Example of which, Take a kindled Lamp, in which the Wiek or Cotten is furred and clogg'd up with the Dreggs of impure Oil, whereby the Oil can have no farther acceſs to the burning Flame; and hence it comes to paſs, that it goes out, and vaniſheth, and dies, though there be ſtore enough of Oil. So likewiſe is it with an old Tree, though there be ſtore of Dung thereto applied, yet the vegetation is not alwaies, and for ever, but all things die at laſt. Now, the crude, groſs, and clammy humours inſinuating themſelves into the Roots, do haſten on this death, and the Roots being ſtopt or clogged, the due nutriment is withdrawn or with-held from the Tree, like as is wont to happen in Men, and in burning Lamps, as we ſaid but now.

All things have their natural Cauſes, the which thing God Himſelf hath doubtleſly ſo ordained and implanted in Nature, that all things in their order haſtening on to their deſtruction, nothing may be found wholly conſtant and ſtable in natural things, but be all ſubject to decay and death, and that Eternity alone, and Divine ſtability, (or the durability of cœleſtial things only) might be laid open.

Bright clear Water, having its courſe through Channels and Wooden Pipes, doth, after many years time, at length fill them with Dirt, ſtops them up, and bars up its own way and current. This is the Operation of the clear and cold Water of Fountains; the hot Baths do it far ſooner, as appars in the *Aquisgrane* Baths, and others, in which the *Aquaducts* and conveyances for the Water are to be frequently opened and cleanſed, whereby the Water may have the freer paſſage. But thoſe Waters, which being hot, do (when cool) preſently let fall their fæces in the Veſſels, and ſtop or furr them up, do moſt ſpeedily of all ſhew this ſame operation. The ſame is alſo done in open Veſſels, if, *viz.* the clear and tranſparent Water of Fountains be ſeveral times heated in a Copper, and be agen ſo often cooled, there doth then at length ſtick on to the inſide of the Copper a tenacious ſlimineſs, which at laſt is turned into an hard Stone.

If now the pure and bright Water of a Fountain effecteth ſuch an operation, What, think you, would that Water do, which in its own nature is troubled or muddy, thick, ſaltiſh, and ſlimy. Hence it is that not only new-preſt Wines, or that thickiſh, muddyiſh Muſt, do let fall their fæces to the bottom, and faſten their Tartar to the ſides of the Barrel, but even the old Wines do likewiſe do the ſame, but not ſo much as the new ones do.

Now then, ſeeing that ſuch kind of troubled drinks are uſed by men for nutriment, it is clearly neceſſary, that (the internal Bowels of the body being ſtopt by their dregginеſs) their nouriſhing property of the Life muſt with-draw, like as the feculent Oil withdraws from the light of the Lamp: For all thoſe things which a man feeds upon, and daily drinks, do in proceſs of time ſtop up the paſſages of the internal bowels and conveyances in the body of man, and ſo deſpoil the vital Fire of its nutriment. Therefore by how much the more this nutriment of the Life is withdrawn, ſo much the ſooner is the light or vital Fire extinguiſhed, and the cold and darkſome death approacheth the nearer, and becomes ſuperiour. From hence aroſe that old Proverb, *Eat ſuch things as are well cook'd or baked; Drink ſuch drinks as are clear; Speak ſuch things as are true, that ſo you may be long-lived.*

But now ſome may ſay, I will therefore ſhun troubled drinks, and feed upon well-dreſt and well-prepared Meats, that ſo by ſhunning the way for Death's entrance, I may enjoy a long-life. I confeſs, 'tis well ſaid, for ſobriety in meat and drink, and the ſhunning of groſs and crude meats, and troubled drinks, do much help to conſerve health: But yet it does not follow, that he ſhall not be at length ſubject to Diſeaſes, nor die; for there is no meat that is ſo well cook'd, and no drink that is ſo clear, but it carries with it its hidden fæces, with which the internal Veſſels may in a longer proceſs of time, be ſtopt up, and Diſeaſes introduced, even as we ſhewed but now, by an example drawn from Fountain-water, which in proceſs of time ſtops up its own paſſages: And by the ſame reaſon too muſt thoſe Trees that are in the higheſt tops of the Mountains at length die, when (though they are nouriſhed with moſt clear Rain-water) their nutrition is with-held from them by the ſtopping up the pores of the Roots.

But yet I do not ſay that an Oak, or ſome other wild Tree, in wild places, which is nouriſhed only with the Rain-water, and the Leaves which yearly fall off, dures no longer than ſome Fruit-bearing Tree does, which is dunged and nouriſhed in the Gardens with ſingular care and labour: No, for it is known, that an Oak doth many times endure and live a Thouſand years; whereas on the contrary, ſuch a tilled or tenderly-kept Tree ſcarce attains to the Hundredth year, and this is to be imputed to the diverſity of nutriments. The Stag in the Woods, and the Crow in the Air, live above an Hundred years, but being caught and finely fed, they ſcarce live Fifty years. A man that lives barely upon Bread and Water, will doubtleſs prolong his Life to far more years than if he uſed

uſed delicate food and drink; and this is a moſt manifeſt thing, and yet men lay it not to heart, but by enjoying too great a plenty of delicacies, they burthen Nature with too great a load, from whence obſtructions of the bowels do ariſe, and a way laid for Diſeaſes to enter in. A Tree that is dunged with too much Dung, gets to it ſelf, together and at once, too much fatneſs, and this choaks up the Roots and hinders nutrition, whereby the body and boughs thereof cannot be ſupplied, and ſo conſequently Death muſt enter in, and put out the Life of that Tree. What Counſel now? You will haply ſay, If that obſtructions be the principal cauſes of Diſeaſes and Death, are there no Remedies, by whoſe help ſuch like obſtructions may be prevented; or (if they already are made) be wholly removed and taken away? Yes, I ſay, that both may be done, *viz.* a timely prevention, and alſo a thorough abolition of them, when they have gotten head; and this to be done by ſuch kind of Medicaments which are friendly to Nature, and contrary unto the things from which thoſe obſtructions and conſtipations have their riſe; for cold, tenacious, impure, and watery humours muſt neceſſarily be attenuated, mollified, cut, and opened by heating, attenuating, inciding, or cutting, penetrating, and fiery Medicaments; for daily Experience teacheth, that it is a thing clearly impoſſible for obſtructions to be taken away, what kind ſoever they be of, without the help of warming and penetrative Medicaments. And amongſt all thoſe Medicines, theſe are found to be the moſt certain and moſt efficacious, *viz.* the volatile Spirit of common Salt, or of Vitriol, void of corroſiveneſs; the volatile ſpirit of crude Tartar; the ſpirit of Urine, and of Salt-Armoniack, and other the like fiery Spirits, which do exerciſe their Virtues with moſt excellent ſucceſs in the taking away of thoſe kind of obſtructions. But foraſmuch as thoſe volatile ſpirits do for the moſt part ſet upon and reſolve ſuch obſtructions as are but beginning, and not as yet confirmed, but do not ſeize upon the more fixt and inveterate ones, as having not ſo much ſtrength as to ſubdue and caſt out them, for they are to be caſt forth by their like, that is, by the more fixt Medicaments; which thing no ſkilful Phyſician will gain-ſay. The whole drift therefore of the buſineſs lies in this, *viz.* by what means ſuch kind of Medicaments may be gotten, as by whoſe help not only the newly-riſen obſtructions, but alſo the inveterate and confirmed ones too, may be driven out of the body of man. Now, this cannot be effected by Herbs, and ſuch-like natured things, as is ſufficiently witneſſed by this preſent Age, for no body that is ſubject to thoſe kind of obſtructions, is cured by the help of the Herbs, and ſuch-like things. For after that the ſick Patient hath a long time uſed the palliative Cure in vain, Death at length comes forcing in, and ſnatcheth him away after his licking in many Pots full of ſuch ſtuff, which notwithſtanding, by ſome good Medicine might have been eaſily prevented: For, I pray, how can it poſſibly be, that a cold, groſs, crude, and not well-prepared Medicine ſhould draw forth cold and groſs humours, which ſhould be heated, cut, and mollified? 'Tis juſt as if a man would melt one piece of Ice with another piece of Ice, and ſo reduce it into Water; but yet it will never be done without fire or heat. And therefore a penetrating, fiery, living, and good Medicament, is to be applied unto thoſe cold and tenacious obſtructions, to heat, extenuate, and ſcowre them out; and the Syrups, Conſerves, and the cold, dead, and mucous or ſlimy Juleps ſhould be removed.

Verily, I cannot ſufficiently enough wonder, when I think upon the ſmall regard that is had to the Life of Man, and how raſhly and wantonly it is neglected, out of meer pure ignorance.

The preſent World is ſo blind and perverſe, as that it neither will nor can believe this, though it be ſhown it even with ones fingers: But yet this ſtubborn perverſeneſs does not hurt any ſo much as it does the Innocent, who underſtand not theſe things, and are even conſtrained to credit thoſe things only which they hear of; all other things they commit to Chance and Time, together with the reſt of thoſe errours, unto which, as likewiſe unto other abuſes, this endeavour of mine, will (if God ſo pleaſe) ſome time hereafter adminiſter ſome Redreſs.

We do therefore conclude and determine, that the principal and chiefeſt occaſion and cauſe of Diſeaſes and Death, are theſe ſlimy, groſs, tenacious humours, which by little and little ſeize on and ſtop up the internal bowels of the body, and withdraw (or withhold) from the radical humidity its nutriment, and ſo debilitates the vital fire more and more, and at length quite extinguiſh it.

Now, to remove and throw off theſe Furrings, there is no other Remedy, but that the paſſages of the internal bowels be kept open and clean, or that they be opened and unlocked, as 'twere, if already ſtopt up.

Now this thing my *Aurum Potabile* can perfectly effect; a better Medicine than which, and one more apt and fit to open all the obſtructions of the body of man, 'twill not be ſo eaſie a matter to find; for it is in its nature a ſubtile, fiery, penetrating eſſence, warming all cold affects, attenuating the groſs, inciding or cutting the tenacious, and conſuming, and drying up all humours and Wateriſhneſs; inſomuch that (being made uſe of) it doth inhibit and impede the generation (or growth) of all kind of obſtructions, and by mollifying and inciding them when they are already generated, doth wholly take them away: Upon this accompt, by its corroborating the radical moiſture and vital ſpirit, and preſerving it ſafe and ſound, it gets the preheminence over all other ſuch Medicaments as perform the ſame effect: Moſt worthy is it therefore to be called and eſteemed the concentrated center of all Medicaments. For all thoſe virtues which are found ſimple and divers or diſtinct in any of the Vegetables, Animals, and Minerals, and which do, by a *Particular* Efficacy, ſet upon Diſeaſes; are concentrated in my *Aurum Potabile*, and being collected into one, do diſplay all the virtues of thoſe particulars univerſally, and therefore do theſe virtues diſcover it to be well worthy the name of an Univerſal Medicine: For this Medicament does not only exceed all other Medicaments in the moſt ſpeedy operation of its virtues in the curing of the bodies of men, but alſo it plainly abounds with the ſame admirable virtues in the bettering of the Vegetables and Minerals; and therefore it is to be preferred beyond all others, and to be extolled with the higheſt Praiſes.

But now, if in caſe it ſhould abound with far more noble and more efficacious virtues, (as to the taming and ſubduing the Diſeaſes of men) then it already hath; and yet, on the contrary, ſhould effect nothing

by those its virtues in the melioration or amending of the Vegetables and Minerals, it could not possibly claim to it self the Title of an Universal Medicine, but would be rank'd amongst the number of *Particular* Medicaments, as tending only to the curing of the Diseases of Animals. But now, seeing that (as we said before) my *Aurum Potabile* doth most powerfully help not only men, in the Animal Kingdom, but likewise in all the Vegetables and Minerals, (out of the Dominion of which three Kingdoms, *viz.* Animal, Vegetable, and Mineral, there is nothing in all Nature to be found) and is a most high Medicine unto them all; therefore also the Name and Title of a *Universal Medicine* doth rightly and properly appertain thereunto.

The Philosophers do indeed ascribe thus much unto their Universal Medicine, *viz.* that it is able to heal all the Diseases of Mankind, and of the imperfect Metals, and their defects, and transmute the said metals into perfect Gold. But concerning its being the supream medicine for Vegetables too, that they are silent in: Why they silently pass this over, for my part, I cannot certainly tell, nor do I deem it necessary to expound the same: 'Tis sufficient that my self have proceeded farther, and do manifestly declare, that it will perform the same in the Vegetables too.

But yet I would that every one should understand me aright, and not count me so simple, as if I did liken or compare my *Aurum Potabile* with that great Stone of the Philosophers, which transmutes vast quantities of imperfect metals into most pure Gold by projection: No, no, I do not ascribe such great Virtues unto my Medicine, which it has not in it, but yet withal I cannot tell, whether or no in process of time some better thing may not arise therefrom.

Farther too, the Philosophers say of their Medicine, that it can make variously-coloured precious Stones, agreeable in any colour to the natural ones, out of all kinds of Flints. And now, perhaps some or other will require this of my *Aurum Potabile*; to whom I reply, as afore, so agen now at present, that my *Aurum Potabile* is as yet imperfect, and is but in its infancy, which haply (being brought by the benefit of the fire unto perfection) will effect the self-same thing: But in the state which at present it is in, and whereunto my self have brought it, and 'tis at present constituted in, it is turned in three hours space in a covered Crucible, into a transparent Stone, red like blood, and resembling a Ruby: Of which, if a little bit be cast into molten glass, it makes it green, yellow, sky-colour'd, or even black too; according to the moreness or lesness of the quantity thrown in, or according as it is longer or lesser while kept in Flux. If now it operates these things, whilst unfixt and immature, any one may easily conjecture what it would effect, were it brought to a perfect constancy in the fire.

But it tingeth some sorts of the white Flints, kept for some hours in the Fire, with various colours, and transmutes Sulphur it self into most excellent Gold; which effect makes me more admire, than all the things that I ever heard of; and how this betided me, it will be worth the while, at present, to make mention of. I did once put some ounces of my said *Aurum Potabile* in a porcelane dish, as they call it, and placed it in Sand, that by the evaporation of the Phlegm, I might reduce it into a Salt: But whilst I was absent, the heat of the Fire being too much encreased, a good part of the Liquor boil'd over the Dish, and spilt it self into the Sand, Now when I came to look to it, I perceived that the Liquor which boild over the dish had hidden it self in the hot sand, I took out the said sand, which with the *Aurum Potabile* was gathered into one body or mass, and I put it in a glass, and poured Rainwater thereupon, and placed the Glass in hot Sand; then I put the Water with which I extracted the Salt, into a Tunnel, together with the sand which was to have the salt separated from it, and so I separated by a Filter the Liquor thus impregnated with the salt, from the sand, which said Liquor past through transparent, and unchanged in colour and taste: But now this sand, which was white at first, was clad now with a red colour, which stirred in me an exceeding admiration, that this Potable Gold of mine should tinge the sand. This sand I put in a Cupel, and brought it to the Test, and it yielded me pure good gold; and this made me wonder the more; for verily it is a wondrous transmutation, and such as I never heard of.

Upon this account do I perswade my self, that a piece of Crystal may by a bare digestion in this potable Gold, be digested into a precious Stone, but I have never as yet tried it, but yet I will try it, if God prolong my Life.

Having made this trial with the sand, I presently conjectured, that the sand which I planted my Herbs in, and which I moistened with my *Aurum Potabile*, did not impart the full virtues, and all the qualities of the gold to the Herbs, implanted therein, but did retain the better part to it self, for its own melioration, and afforded but the smallest portion thereof to the Herbs: Nor did this conjecture deceive me, for upon this occasion I searcht farther into this business, and found it even so. And therefore, for the future, I used no more sand, for the communicating the golden virtues and faculties unto the Herbs, but instead thereof, I used Sawdust, in which I began to sow or implant the Herbs, for Wood is not endowed with such powerful or strong virtues, as to be capable of extracting the aureous Essence out of the Potable Gold, like as the sand doth.

Upon this accompt therefore any rotten Wood or even the Sawdust of Wood will be more fit for this Work of planting, than sand it self is, for the sand attracts to it self the most principal virtues of the *Aurum Potabile*, and thereby doth better it self, and bestows upon the Vegetables some small Reliques only. Had I not accidentally found this effect, the sand would have robb'd me of much benefit.

Moreover, this thing likewise, which is well worth the knowing, must not be passed over in this place, *viz.* that what herbs soever are (by the help of my *Aurum Potabile*) grown up, they are all of them greater and stronger than the common sort are, and do far exceed them in colour, taste, smell, and in all virtuous qualities. The reason is this, because the said *Universal Medicine* is a meer fire, and bestows its fiery vigour upon the Vegetables and Herbs: For it is a thing sufficiently known, that by how much hotter the Countries be, so much the more efficacious Herbs do they produce.

The Herbs that grow in the lower *Holland* Countries, are not comparable to those which the upper *Germany* (which is of a drier and hotter soil and that

air) doth produce, neither in odour, ſavour, nor virtues. Nor doth High-*Germany* produce Herbs of that efficacy and bigneſs as *France* doth, which is of a hotter and drier air than *Germany* is; for in *Germany* Roſemary will hardly preſerve it ſelf ſafe from being injured by the Winter ſeaſon; whereas in the French Deſarts it grows ſo exceedingly well, as that it runs up like Trees, capable of defending one againſt the Rain, the which thing is not uſual in the more cold Countries. Verily moſt excellent Honey is brought from *Marſeilles*, (where the Bees ſuck it out of the Roſemary Flowers) into *Germany*, *Holland*, and other Countries, wherewith excellent Metheglin is made, and other Fruits and Flowers conſerved therewithal. But that Honey which the Bees are wont to gather in *Holland* and *Friezland*, about in the moiſt Meadows and mooriſh Fields, from the Flowers there growing, hath ſcarce any odour at all, but yet it is in goodneſs beyond that which the Bees gather from the ſtrong-ſmelling Flowers of wild Trees, or from the Bloſſoms found in the barren Broomy Thickets. By this therefore it appears, that there is a vaſt difference between the Virtues of the Herbs in this or that Country, and that ſuch men are not a little deceived, who without any regard had, eſteeming of all the *Europæan* Herbs alike, do attribute to the Herbs of the Northern Countries, as *Denmark*, *Swedeland*, *Norway*, *Poland*, the ſelf-ſame Virtues as the ancient Phyſicians aſcribed to theirs, in the more Southern Countries. And thus do our modern Galeniſts, affirming that their moiſt Herbs in theſe cold Countries are of equivalent Virtues to thoſe Herbs which the ancient Phyſicians have made mention of; but Experience ſufficiently teſtifies what effects they ſhew, and what errours the ſaid Galeniſts commit.

Avicenn, *Averroes*, *Æginet a*, and the pillager *Galen*, were not *Germans*, *Swedes*, *Danes*, or *Polonians*, but dwelt in thoſe hot Countries, wherein the ſoil or earth was day and night heated with the Solar rays, and impregnated with an aureous property, and ſo communicated to the Herbs wonderful Virtues and admirable Efficacy. Extreamly therefore do they erre, that dare attribute the very ſelf-ſame virtues to the Herbs of our colder Countries. But I confeſs, that by the benefit of Art, the ſelf-ſame virtues may be beſtowed on the Herbs, even in our moſt cold Lands, which thoſe Authors attribute to their *Arabian* Vegetables; *Where Nature ends, there the Artiſt muſt begin*, ſay all the Philoſophers, but eſpecially *Hermes*, who is, as it were, the Father of all the Philoſophers, doth clearly and openly teſtifie the ſame in his *Smaragdine Table*, ſaying, *That which is beneath, is like that which is above; and that which is above, is like that which is below, for the accompliſhment of the Miracles of one thing*, &c.

And albeit that theſe words are expounded with divers Explications, yet notwithſtanding, the general ſenſe and meaning of them points at nothing elſe but the ſuperiour and inferiour ☉, which generates all things, and brings them to perfection: We cannot by any force draw unto us the upper ☉, much leſs enjoin him to make our Lands partakers of his more hot beams, and to fill the Herbs that grow therein with the ſelf-ſame virtues that the *Arabian* Vegetables were endowed with: Alas, the Sun neither hears nor knows us, but proceeds on in its accuſtomed courſe, and diſchargeth that Office which was impoſed on it by the Divine Power. If we are deſirous of bettering thoſe gifts of Nature that are vouchſafed unto us, then muſt we ſet about the Work of Art, and ſee whether or no it (being an imitator of Nature) can afford us any help. And this it will do very eaſily, inſomuch that our *Europæan* Earth may bring forth as efficacious Herbs as the *Arabian* ſoil doth, and that with ſmall Coſts and Labours; ſo that there is no need of my more chargable *Aurum Potabile* for the accompliſhment of that buſineſs; for a ſulphureous and fluid ſalt Water will perfectly effect the ſame, ſeeing that in ſalt and ſulphur the Solar beams are abundantly concentrated and coagulated. This is our Terreſtrial ☉, by the virtue whereof all things do grow, which if we do but know how rightly to fit and order, we ſhould verily effect the very ſelf-ſame thing by the help of Art, that the ſuperiour and natural Sun operates in the Herbs, after its natural kind of way.

He now that neither underſtands nor apprehends theſe things, is not at all worthy to be accounted a Philoſopher, but follows after blind Leaders, and hurries others as well as himſelf into darkneſs. The Sun performs its courſe in the Firmament, according to its accuſtomed manner, and cannot be rendered either greater or leſſer: But we have the inferiour Sun in our power, and can accommodate it to our Herbs according as we liſt our ſelves, and in what quantity we pleaſe.

Upon this accompt *Art doth far outſtrip Nature*; and 'tis in our power, by the help thereof, (*viz.* of Art) to outſtrip it, if ſo be we have it and know how to uſe it. But this Diſcourſe of mine hath been more large than I intended, and minds me of deſiſting therefrom. I ſuppoſe I have ſpoken enough for a wiſe man's inſtruction; and thus much I thought it was expedient for me to hint by way of a Parentheſis.

But yet however, that I may the more clearly and more perſpicuouſly ſet down all matters, that ſo every one may ſee and apprehend, that I have ſet before them the meer pure naked Truth; I judge it expedient to inſert here yet more Examples and Inſtructions, that ſo whoever has a mind to make trial, may in very deed experiment the Truth of this thing.

Coagulate my Potable Gold into a red Salt, and put in 3, 4, 5, 6, 7, 8, 12 grains, more or leſs, into half an ounce of Cryſtal glaſs melted in a Crucible, that lying in the ſuperficies thereof, the ſaid grains of *Aurum Potabile* Salt may be molten. This done, the glaſs will preſently attract into it ſelf the Tincture, and become of a Jacynth colour, and ſo delicate, that it is not a whit inferiour in colour to the natural Jacynth. NB. If the melting be continued yet longer, the glaſs will be tinged with a golden, green, sky-coloured colour, and at laſt with a black-colour too, if it be too long left in the fire.

He that deſires to make a Ruby, let him put the bare coagulated Potable Gold (without the addition of any peregrine thing) into a pure and covered Crucible, and there leave it in fuſion for ſome hours, and he will get ſuch a delicate blood-like coloured glaſs, as is capable of refreſhing a man's nature, when debilitated with the multiplicity of cares, troubles, and labours, and this by a bare looking thereupon. And any one may eaſily conjecture what a refreſhment it will be to a man's mind, when (after abundance of vain-ſpent labours, and exceeding earneſt expectations of the Bleſſing of God upon them, he doth at laſt ſee with his own eyes, that that thing is poſſible to be effected, which with ſuch an incredible, ardent a deſire

he hath so long a time sought after. Without doubt the seeing of the promised Land did affect *Moses* with an unexpressible joy, though he never entred thereinto.

What man knows by looking upon the seed of any thing, what colours and what figure the Plant is of, that will proceed therefrom? but in its growing up by a due nutrition, it doth at length become manifest, which afore lay therein hidden: Even so the true first Ens of Gold lies hidden in my *Aurum Potabile*, and is not visible to the sight, much less doth that appear which shall or may by Art be made thereout of, before it shall have arrived unto its constant fixity or fixation, (as the Chymists phrase it) by the help of the fire. And therefore must there be a patient expectation until this Infant wax ripe, and attaining unto a man-like estate, it performs man-like actions.

Who would ever have believed that there lies hidden in an Egg the whole essence of a Bird, with all its Members, Feathers, and whatever else appertains thereunto, but that it is a thing so thoroughly common? The Must of Wine, if drank in too great a quantity, hurts the stomach, weakens it, and causeth Colick pains; and the same Liquor, after it is become a strong and clear Wine, corroborates the stomach and the whole body, and so at length lays off those virtues or properties which it held hidden in it self whilst it was Must. He that knows a Vegetable Seed, an Animal Egg, or a Mineral *primum* Ens, doth at last also come to know, that from a Seed there must proceed an Herb, from an Egg a Bird, and from the first Ens of Minerals an Universal Medicine: But he whose understanding cannot comprehend these things, but contemns them, as an abject or contemptible Seed, Egg, and first Ens of Minerals, *viz.* a sulphureous Salt, such a one doth even ignorantly despise the Herb, the Bird, and the Universal Medicine hidden therein. Therefore no body should contemn those things that he has no knowledge of. And seeing it is clearly perceptible, that the first Ens of Gold hides within it the true Universal Medicine, and which Time, Art, and Nature will really produce unto the Light: Therefore there is no reason why any one should undervalue my Potable Gold, or despise it, because it is as yet in its infancy, and is like some common salt water; but he should rather think thus with himself, that it is like the white of an Egg, which hides within its inward bowels, as I may so say, its yolk, which in process of time will bring forth a most delicate Bird.

But these things which I have already spoken of the nature and properties of my *Aurum Potabile* may suffice; its Medicinal use shall shortly be clearly described amongst my chiefest Medicaments, and so be published, together with them. But he that is minded to make use of the same in the mean while, may safely do it, and without any kind of hazard at all, for it operates nothing else, but what is conducive to the good health of man's body, corroborating the debilitated radical humidity or vital spirit, and confirming it, by which the life of man is nourished, encreased, and conserved many years in a wish'd-for, healthful estate, just as a Lamp is kept alive by the pouring on of Oil, or the vigour of the Fire by the apposition of Wood thereunto, by which it is preserved from extinguishing and dying: But yet the use thereof must be warily and judiciously admitted, because being a meer pure fire, it must be moderately adhibited. At the beginning of administring it, one or two drops may be given in Wine, Ale, or other Drink, unto the Sick, but best of all in the spirit of Wine: Then the next following day one little drop more may be added, and so the Dose may each day be augmented by the apposition of one small drop, until it work by Sweat and Urine, and sometimes also gently by Stool.

This Operation being made (and on this wise active) then the Doses are to be in like manner daily lessened by the omission of one drop at a time, until the Sickness be happily removed, and so the Sick need no farther use of the same.

All things being thus rightly instituted, it will manifestly appear, that all Sicknesses, yea, the hidden ones too, are expulsed by this Medicament, and even as it were consumed. like as Wood is consumed by a burning fire, in such wise, as that nothing at all of it remains, save the fixed Salt, but is all reduced into a Nothing: For all Diseases, as we shewed afore, have their rise from moist humours, which nothing can heal and remedy more commodiously and safely than this *Aurum Potabile* of mine, which is such a vehement resister of all over-abounding humidities, opening, inciding, consuming, and dispelling them, just as the ☉ consumes Water in a Vessel, and wasts it away by evaporation. Hence it is, that it both cures, and by way of a preservative, prevents the *Leprosie*, *French-Pox*, *Quartane*, and all other *Fevers*; the *Scurvy*, *Epilepsie*, *Apoplexy*, *Hypocondriack Melancholy*, *the Stone in the Reins and Bladder*, the *Gout*, and all the *Diseases of the Matrix*, both known and unknown, and the various Sicknesses of Women, as also the dreadful *Plague*, with all the evil effects arising therefrom. For it is found, that nothing is subject to Corruption and Death, but an abounding Phlegm, or an immature humidity which is wont most speedily to pass into a putrefaction.

From hence it is clearly manifest, that the sanguine man, which is endowed with a drier temperature, has a far better fruition of his health than the phlegmatick man hath, who abounds with moisture.

Dry Sugar dures many years, but being moistened, it turns sowre, and becomes ropy and ill-savour'd, tho' it be a Salt, and is mixt with other corruptible Vegetables to preserve them.

From hence may it be seen, that a superfluous humidity opens the Gate for Death to enter in by, and seize upon the Life: But on the contrary, a temperate siccity preserves all things in an healthful state, and barrs up the passage against any corruption. The Roof of a curious and stately-built House being full of chinks and holes, lets the Rain in, which moistens all the whole structure, and causeth it to rot and spoil: But if the holes in the Roof be stopt, and the windows by which the Rain beats in be shut, and the windows on the other side of the house, where the wet beats not in, be on the contrary opened, that the warm Air passing in, thereby may throughly dry up all the moisture, and so inhibit or put a stop to the Progress of Putrefaction, then the whole frame and building will be kept sound and good, which otherwise would be rotted and quite spoiled. Such men as live in the mooriſh fenny Countries, and feed upon a wateriſh Meat and phlegmy Drink, are for the most part of an unsound temperature, and troubled with Catarrhs and the Scurvy. But on the other hand, those that inhabit high and lofty places, and have the fruition of a drier and purer Air, and that feed upon such meats as are more conducive unto health; these men know nothing of those watery sicknesses, but have flouriſhing and strong bodies, and have firm, compact, and excellently well

well tempered fleſh. And this difference is not found only to be in Men, but alſo in all other things. For not only Bread, Fleſh, Fruit, and ſuch other things as are uſed for daily food, do grow mouldy much ſooner in the moiſt places, and ſo corrupt, but alſo even Metals themſelves too, as Iron, Copper, Tin, and the like, even theſe cannot ſhun the corruption of the Air, but are laid over with Ruſt, which (in a drier air) they do not ſo eaſily contract.

By all theſe circumſtances it is ſo clearly evidenced, that ſuperfluous moiſture is to all things alwaies hurtful, and gives an inlet unto Corruption, that I think there is no body that will dare to ſay any thing to the contrary.

And therefore ſeeing that this *Aurum Potabile* of mine doth (amongſt all other Medicaments, what Title ſoever dignified with) moſt notably excel in the taking away of Corruptions, and may be moſt ſafely made uſe of both for preſervation from, and curing of Diſeaſes, it ought to be accounted and eſteemed of as an *Univerſal Medicine*, and that very deſervedly, and which gives place to none.

Theſe few things I was willing to deſcribe here in this place, concerning the uſe, efficacy, and virtues of my Potable Gold, in the curing of the Vegetables, Animals, and Minerals. There ſhall ſuddenly follow more concerning the ſame, in *The Deſcription of the uſe of my Principal Medicaments.*

It now remains, that I make ſome brief mention of the preparation of my aforeſaid Potable Gold, although I have already often done the ſame in many places of my Writings, and have very clearly ſhown the ſame, but yet after a Philoſophical manner, and without ſetting down any Receipt, but here and there by piecemeal; as for example, in my *Miraculum Mundi*, in its *Expoſition* and *Continuation*, where it is briefly deſcribed, ſo as that it therefore needs not any farther illuſtration.

But yet, that I may abundantly ſatisfie all men, I do (by way of over-plus) admoniſh every one, that he do not think that this ſubject is to be ſought after from foreign and far remote places, with a great deal of coſts and charges; for the matter out of which my *Aurum Potabile* is made, is in every place, and offers it ſelf even in a manner *gratis*, to the moſt poor as well as the richeſt, and without Coſts, and is brought to its perfection in three daies ſpace: To that perfection, I ſay, (that you may rightly underſtand my mind) as its infancy requires, *viz.* ſo as to become a *Lac Virginis*, or a clear Univerſal Medicinal Water, which I call *Aurum Potabile*, and in which the moſt precious Dragon's-blood lies hidden, which is to be tranſmuted in a certain limitted time, by fixation, into a conſtant Salamander; the which I have not as yet ever effected, and therefore forbear to uſe more words, reſting ſatisfied with this my *Aurum Potabile*, which I have many a time prepared by my labour, and here treat of, and forbear to multiply any more words about things of greater moment. In the mean time I doubt not, but that (if time and labour be beſtowed hereabouts) this *Aurum Potabile* would arrive unto the utmoſt fixity and conſtancy, both in the moiſt and in the dry way.

Farthermore, I deny not, but that this ſame *Aurum Potabile* may be made of all the things of the whole World, but yet eaſier and ſooner out of one ſubject than another. *There is no Infant that is born ſo poor, but that he neceſſarily enjoys that ſubject, and cannot live without it:* Therefore ſome of the ancient Philoſophers have written, *That* Adam *and* Eve *had the ſame matter in* Paradiſe; when as yet they had no cloathing.

Mary the Propheteſs and Siſter of *Moſes*, calls it, *The Work of three hours*; another calls it, *The Philoſophical Work of ſeven daies*: I *Glauber*, being a new Diſciple of *Hermes*, do moſt truly affirm, That this my *Aurum Potabile*, which I here treat of, may be perfected not only in three daies, but even in three hours ſpace, and that out of ſuch ſubjects as are every where to be found, and which all men know and make uſe of, and cannot be without.

I ſpeak the pure naked Truth, without hiding it under any Coverings of ſimilitudes or enigmatical expreſſions. And that no body may think that theſe my Writings are not to be underſtood according to the Letter, but that they conceal all things under an hidden meaning, I do again affirm this third time, that the *Aurum Potabile* which I write of, may be made of any Vegetable, Animal, and Mineral, but yet ſooner out of one than another. For although any one may prepare it out of a piece of Wood, Bread, or Fleſh, and out of an handful of Straw, Leaves, or Graſs, yet notwithſtanding, it may be eaſier made out of an handful of the ſalt of any Vegetables and Animals, as being their concentrated center; and this I bequeath to the whole World as an infallible Truth. But I would have every one rightly to underſtand me, what Salt I here point at, *viz.* I mean no other, but that which is to be found in all things.

But that the true meaning of my words may be yet the clearer and openlier diſcloſed, I will adjoin a ſhort but fundamental Diſcourſe. It is not ſufficient for a lover of Art, that is inflamed with a deſire of obtaining ſome good thing, barely to read over ſuch or ſuch a Philoſopher, and preſently to perſwade himſelf, that by the meer reading, he ſhall forthwith underſtand clearly and perſpicuouſly the Art treated of. No, but he muſt accurately meditate, and conſider what that is which he ſeeks for, whence it hath its original, and by what means or what way he may obtain it. For if we will make our ſearch from the utmoſt and extreameſt Coaſts (or Bounds as it were) even to the inmoſt bowels or center, we ſhall find, that God was One and alone from Eternity, even till the time wherein it pleaſed him to create viſible things for His own glory and delight. And when He went about doing this, He ſaid, *Let it be:* Aſſoon as this *Fiat*, or *Let be*, was pronounced by God, it began to move it ſelf, and to change (or turn) into four Elements, out of which Elements there afterwards aroſe all thoſe Creatures, which can be diſcerned with our Eyes, and without the four Elements they could neither be nor conſiſt, and without them even Nature her ſelf can bring forth nothing.

Now, if any one would endeavour after what is purer and better than thoſe things which are generated from the Elements, he muſt make his attempts by *ART*, the which, by overcoming or outſtripping *NATURE*, hath its tendency to that Butt whereunto Nature cannot attain; and he muſt there begin his operation where Nature ended hers, as not knowing how to make any farther progreſs: For then is a *Quinteſſence* obtained, which exceeds Nature one degree, and cannot be promoted by Art any farther.

But if any one has a deſire of obtaining any better and greater thing than this ſame *Quinteſſence*, he muſt then proceed ſome other way; for (as we ſaid but now) Art cannot make any farther progreſs beyond

a Quinteſſence: And therefore neceſſity requires, that there be made a regreſs or retrogradation unto the Center from which the very Elements themſelves have their original. This Center is that Divine *Fiat* or *Univerſal Hermaphroditick Salt*, participating of both natures, which being the true *Primum Mobile*, comprehends hidden in it ſelf two contraries, which acting one upon another, do bring forth the three Principles of the three Kingdoms, *Vegetable*, *Animal* and *Mineral*, and do nouriſh them by the four Elements, and multiply them, and this is the common courſe of nature.

But now Art makes a much farther progreſs, and reduceth the *Circumference* to the *Center*, and doth not permit unto that *Center* or *Primum Mobile*, that the *Patient* be overcome or ſubdued by the *Agent*, by the operating of thoſe two contraries upon each other, nor does it ſuffer it to paſs into thoſe three kingdoms, *viz.* *Vegetable*, *Animal*, and *Mineral*, as into its Circumference, but doth ſo ſubdue, and keep, and bridle in that *Primum Mobile*, that it does not divide or dilate its Virtues by a large circumferential walk, as it were, but doth in a manner ſwallow them down into its own ſelf, or concenter them; juſt as if a Dragon ſhould bite off his own venomous Tail, and therewithal nouriſh himſelf, when he cannot light upon any other Food, and ſo by this means becomes a moſt high Medicine. And therefore moſt wiſely ſaid *Hermes*, *Our Dragon doth not die, but by its Brother and Sister*. It is a thing neceſſary, that one Fire ſhould overcome the other, and tranſmute it into a more noble eſſence. Such a fire as this, is my *Alkaheſtical Arcanum*, or true *Aurum Potabile*, with which wonderful things may be effected. It is a tranſparent clear Water, wherein the colour and form of Fire lieth hidden and introverted; but yet that internal Fire is eaſily and ſpeedily manifeſtable, and educible unto view, by either the dry or moiſt Fire. The dry way is done by the heat and fire of common Wood-Coals; and as for the moiſt way, a well-rectified Spirit of Wine is to be uſed, and ſuch as is void of all its Phlegm. Take therefore of the dry and concentrated Fire ℥ j. put it into ℥ iij. of the moiſt Fire or Spirit of Wine, which moiſt fire will preſently ſwallow up the dry one. Theſe being both of them digeſted by a due heat of Fire for ſome hours, in a long-neck'd Phial or Bolthead, will put on a blood-red colour, and will manifeſt and expoſe to view its concentrated Virtues, with curious colours, and with a pleaſant taſte and ſmell, by which heart-corroborating qualities it far excels all other Aromatical Eſſences, that ſerve for the ſtrengthening of the heart; for thoſe properties which afore lay turned inwards, and were ſhut up in its inmoſt bowels, are all of them drawn forth and made viſible, and become ſubject to the external diſtinguiſhing ſenſes. By this means the abject and little Infant which was clad in a white colour, becomes a ſpeaking, ſtrong, and prudent man, and this very *Lac Virginis* it ſelf is changed into the moſt efficacious *Dragons-blood*. This now is the moſt true *Aqua-vitæ*, and the moſt true *Wine of Health*, ſome few drops of which being daily taken, do conſerve good health, and beſtow long Life.

Many honeſt men have with their own eyes ſeen at my Houſe the admirable and moſt ſpeedy effects of my often-mentioned true Potable Gold, and eſpecially its operative efficacy in the tranſmutation of the Imperfect Metals.

If therefore ſuch a one as is troubled with grievous Diſeaſes, and who finds no help in thoſe vulgar, commonly-known Galenical Medicaments, ſhall need the help of this my *Aurum Potabile*, I will out of Chriſtian Charity willingly beſtow upon him ſo much thereof, as may be requiſite for the recovery of his former health; and this I will the rather do, that the wonderful miraculous deeds of the Divine Power may be made known in theſe laſt times.

No body ſhall fiſh out from me more Directions than thoſe which I have too and agen hidden in my Writings, concerning this *Aurum Potabile*; let it ſuffice every one, that he can find this Medicine ready prepared in my hands, the which ſcarce one of an hundred would be able to make, were he a Poſſeſſor of the Secret.

This Medicine ſhall lie ready prepared by me as long as I live; I will not deny it to any body; nay more, I will openly ſhew the uſe thereof too, unto ſome of my friends, in the melioration of both the Vegetables, Animals and Minerals themſelves, that ſo the Wonders of GOD, and the poſſibility of Art may be manifeſted, and come to light.

And now, may it pleaſe the Omnipotent GOD, who is the beginning and the end of all things, to inſpire us, out of His meer Grace and Mercy, and implant in our cold hearts, which are ſtopt up with darkneſs, the warming heating ſpark of His Holy, Eternal, Infinite, and all-correcting Light, that it may therein, as in ſome ſaltiſh and ſulphureous Earth, be nouriſhed, and grow up like a little Seed, and bring forth Fruit a Thouſand fold, to the Salvation of all our Souls. *Amen.*

THE

THE

SECOND PART

OF

Miraculum Mundi.

In which is described the Magnificent Coming of

ELIAS THE ARTIST;

And that the wonderful *Salt of Philosophers* is the most Excellent Medicine of *Vegetables*, *Animals*, and *Minerals*.

By the help of which, not only *Vegetables* do grow, and are multiplied; Diseases of Men and Animals, whether internal or external, are miraculously Cured, and Imperfect Metals really changed into *Sol* and *Luna*; yea, pure *Sol* rendered able to sustain the Force of Fire beyond the natural 24th. to the 28th. degree; but also from every Plant natural *Sol* is extracted, and disposed to *fixedness*, for multiplication of it self.

THE PREFACE.

Candid Reader,

AMong ancient Philosophers of the Heathen, as Chaldees, Egyptians, Persians, Greeks, *and* Romans, *yea, and the* Hebrews *themselves, it was a long-received Custom, enigmatically to propose what they esteemed most worthy of consideration, lest such Secrets should either be divulged or lost; to the end, that unworthy persons having regard to the Letter only, and not respecting the Sence expressed in those words, might know nothing at all of them: But contrarily, the Worthy, enlightened with the Light of GOD and Nature, well understanding what is signified by those Words, might thence reap most profitable Fruit. The Truth of this is sufficiently proved by the Writings of ancient Philosophers; also by the Books of* Moses, *and the Histories of the Prophets. For all these, or the greatest part of them, do indeed need another explication, than the Letter it self seems to inferr, because some occult matter is in that contained.*

In like manner our Christian Philosophers, both ancient and modern, discovered their Arcanum's *enigmatically; as, among many other,* Basilius *and* Paracelsus *did: For, although these men delivered all things true, yet they are understood by very few: Which hath been the occasion of Contempt and Reproaches, with which ignorant men, and the evilly-disposed, asperse all Philosophers (among whom Kings themselves, and divers Princes, in times past have been, and are yet found) and say,* There is no such thing in Nature, as the Transmutation of Metals into a better state; *and that* The Universal Tincture or Stone of Philosophers was never found by any Man. *Truly it is a matter worthy of sharp Reproof, and not to be suffered, that the Chymical Writings of many excellent pious men, should (although most consonant to Verity) be so maliciously rejected, and proclaimed false. This is rather due to Chymical Mountebanks, (understanding nothing less than Chymistry) because they expose to sale the Philosophers Stone unto others: This sort of men have rendered Chymistry so vile and abject at this day, as many men judge it a Reproach to be called* Chymists.

That we might, as far as is possible, prevent this evil, and demonstrate those things to be true, which the abovenamed Writers have left to us, under the Title of The Salt of Ancient Philosophers, *which by* Paracelsus *is called* Elias *the Artist; we resolved to effect the same thus.*

Paracelsus *treating of the Transmutation of Metals, because he was not willing to insignize* The Salt of Philosophers *with its true name, referrs the Reader to* Elias the Artist, *who, he saith, when he comes, will teach the way by which the Transmutation of Metals may be effected. Here Men imagine Wonders, and generally regarding the words themselves, expect the coming of a certain Man sent from GOD, whom they believe, shall in the later Ages of the World, discover occult Arts, and make known the Secrets of Nature. Whereas, if the Name* Elias the Artist *be rightly considered, or a transposition of the Letters be made, we read* Artis Salia, *and these Salts indicate* Elias the Artist *of* Paracelsus. *These perform Wonders, so as a man possessing the Salt of Art, or knowing the nature thereof, may effect Wonders.* Elias the Artist *to such a man appears to be the cause of effecting marvellous things.*

Basilius, *in his Testament, did very obscurely describe this Salt, where he sheweth the way of making* The Stone of Philosophers *of common Vitriol; yet no man is able from those Writings to gather which way he should prepare the same.*

Also he that considers the words of Paracelsus, *where he foretells the coming of* Elias the Artist, *will find, that in that he describes Vitriol, both obscurely and openly; obscurely indeed in his Treatise entituled,* The Tincture of Naturalists; *openly, in that which he left, touching Vitriol in Species. He would not expresly say, that* Elias the Artist, *or* The Salt of Art, *was expresly contained in Vitriol; only this he was willing to shew to Posterity,* viz. *That the Art of changing vile Metals into better, was descended from the Ancients unto him, and with him should perish, until the coming of* Elias the Artist, *who should shew the true Transmutation of Metals,* viz. *in the* 58th. *year of the following Age. This time many have expected with grief and trouble, but in vain hitherto.*

Many Philosophers, besides Paracelsus, *have predicted the Coming of* Elias the Artist, *who coming from the* North, *attended with a strong Lion, shall teach Arts, find out and manifest the secret Treasures of Nature, and dispose the various mutations of mundane things for the benefit of Mankind. These have many men in vain believed to be spoken touching some one man; for if we consult the Writings of those men, who have set down this Prediction, we shall find them not to have intended a* Man, *but* Salt-petre *only, and his Brother the* Salt of Art: *Hence it is that they cry out,* O our Salt! O our Salt-petre! O our Radical Salt! *Hence also it is, that they write,* If GOD had not created this Salt, it had been impossible to make our Medicine; *and various expressions like to this, in many places of their Writings they use, as I have declared in several of my Tracts, especially in the Third Part of* The Prosperity of *Germany, where (among other things) I said,* I hoped that in time to come, by me should be unto all men exhibited *Salt-Petre,* or *The Salt of Art,* sitting (like some Monarch) in a Triumphal Chariot.

I doing this, take Paracelsus *out of his Sepulchre, and (as himself predicted) turn him towards the Orient, that is, I expose him to the Light, by which the verity of that Prediction may be discerned by All.*

Perhaps my Disciples may do the same; and they seeing the verity of the Transmutation of Metals, or restoring the Sick to health in a way unheard of, draw me after I am dead, or whilst I live, out of the Sepulchre into which my evil-minded Enemies have cast me. And when they do these things, they will effect so notable a mutation in Medicine *and* Alchymy, *as indeed for the future there will be even no Artist, who will not see and understand the frauds, ignorance, or hatred of the proud and high-flown Adversaries of Art and Truth, and justly oppose themselves against such malicious Enemies of true Verity. Thus may those who have long before been blind, receive sight, profess themselves to have been Opposers of Truth, and strenuously labour to suppress and amend what's amiss. In such a time not only true* Medicine, *and the most noble Art of* Chymistry *would begin to flourish, but also all Arts would ascend to a greater degree of perfection; and so one Age will exhibit it self much more excellent than others. Wherefore my Prayer is, that the Gates may be opened to divine and natural* Arcanums, *that* Elias the Artist, *and the* Salt of Art *would discover the predicted* Golden Age, *and that the most Wise GOD would unto pious men grant an entrance into the* Land of Promise, *that they may thence bring Fruits, and present them to their Neighbours, for the Honour of GOD most high, and the solace and comfort of the Needy.* Amen.

Indeed Paracelsus *makes some mention of this Salt in his Works, calling it* Sal Enixum; *but we in our Treatise (published in the year* 1658.*) of the nature of Salts, have somewhat more largely expounded the matter, calling that* Sal Mirabile. *In the present Treatise of the Salts of Art it is expresly called* Elias the Artist; *the verity of which Appellation, we shall by the help of GOD clearly demonstrate,* viz. *that* Elias the Artist *of* Paracelsus *signifies no other than the* Salt of Philosophers, *prepared of* Salt-petre, common Salt, *or* Vitriol. *Indeed it is in taste like* Salt-petre, *yet it is not inflammable, although it may be procured by Art.* Paracelsus *and* Basilius *made it of* Vitriol, *as several parts of their Writings shew, which for better knowledge sake I shall here insert.*

Elias *and* Elisha, *what men they were, and what miracles they wrought, Sacred Letters shew. The Miracles they wrought were Divine; the same almost is our Salt able to perform in a natural way: Therefore not without reason have we called it* The Monarch of the World, *or* Elias the Artist; *for there is no subject found in the nature of things, by help of which we are able to do the same, as may be effected by the benefit of This. The truth of this all Animals, Vegetables, and Minerals do witness, as we shall demonstrate variously anon.*

But some One may say, Since Chymistry *is treated of in so various Tongues, and there are found almost infinite numbers of Chymical Books, How comes it to pass, that this Salt hath so long remained unknown, even until this day, and it was never so clearly described by any Writer, as we thence could understand what it is, or which way it should be made? I answer, Writers and Readers also are found of a twofold condition. They, who writ by the guidance of Experience, did all acknowledge, and obscurely describe this Salt: Otherwise they, who compiled their Books from the Writings of others, being ignorant of the thing it self, proposed nothing but Fictions, leading the Reader into a Labyrinth and various By-paths.*

Writers are diligently to be considered; regard is not so much to be had of their Words as of their Sence; if this be minded by you, you will find none of the true Writers, who did not make mention of this Salt, which, as it is manifest to those that understand, so it is hid from those who are yet ignorant of these things. You may find very many, who in Writings seek the Stone of Philosophers, *and yet are ignorant what they seek, or what the Stone is, whether it be something black or white, hot or cold. And if such a thing should be presented to those men, they would neglect it, and after their fashion leaving the most precious Jewel, proceed to please themselves in Dung. Many men handle this Salt with their hands, yet what they have in their hands they know not, because they are blind, and their arrogant mind instigates them to betake themselves to things more vile. But on the contrary,*

ry, not a few may be found, who will divulge none of those excellent things which they know. Oh, how happy is he that studies Taciturnity! he is permitted to lead a quiet life. I indeed do seriously bewail my so liberal Communication of Secrets, but I did that to discover the Wonders of GOD, to serve my Neighbour, and to preserve our Art. Egregious things would often be exhibited to the World, did not the high Ingratitude of mortals deterr the Writer, and prevent his good intention. When they find a man endowed with the Knowledge of some things beyond others, they flock about him, entreating him to impart his Secrets to them: there are found divers of this sort. The Wealthy come, the Needy come, and men of a middle condition also come. The first sort of men being, for the most part, very covetous, will return nothing in exchange; the second sort have not any thing to give; but the third only we have sometimes found grateful. What we have acquired with very great labour, we cannot easily impart to Enemies. Yet it often happens, that those who are judged good, are afterward found evil, and in a Farnnerian manner, for Benefits received, return Calumnies and Reproaches. Therefore, in such cases there is need of great circumspection, and we must not discover all we know, lest afterward we repent. But as for my self, I have not changed my mind, I have begun to make known the Wonders of the Omnipotent, and will go on (GOD willing) and kindle an unextinguishable Light to this blind World. In this Treatise I shall only describe the wonderful Virtues of the Salt of Art, reserving the way of preparing or use to my Friends; for what are our Arms, we must not cast them away, lest our Enemies take them up, and wound us with them, after the example of Farnner.

I speak of the Salt of Art, the Virtues of which I know, I will not communicate its Preparation or Use; all shall be open to my Friends, (yet with respect of persons) more than is fit, is already discovered to Enemies. Is there any reason we should cast Pearls before Swine? If what others obscurely treated of, I should here openly communicate to Enemies, would they, think you, cease to do evil, and begin to do well? Although I purpose not at all to discover the Preparation and Use of this Sal Mirabile, yet I doubt not, but that I shall prepare and make easie the way for finding it out; so as in a few years space all Europe will see Alchymy flourish, and not so much any other way, as from the discovery of this Salt.

Of other Arts, which we shall perceive to arrive to a more excellent state, the reason is the same. It is sufficient that I have shewed such an incomparable Salt is found in the nature of things; yea, I demonstrate the place where it may be found. If Columbus had not told us, That the Occidental part of the Earth did abound with Gold and Silver, who could have found the same, to bring such Treasures thence to us? If some One had not revealed, that gold, silver, and precious stones were contained in Caverns of the Earth, and Pearls to be found in the Sea, who (doubting the event) would ever have been at those vast charges of Diggings and Fishings? But now we all know such Treasures are to be found there, none refuseth to search for them. And although they are not obvious to all, yet that they are in being no man doubts; even so I judge it to be with our Sal Mirabile. The virtues of it I deliver, which are great, and with most easie labour, and a very little direction; other things may be thereby obtained. The only moving cause why I propose these things, is the most Wise GOD, whose wonderful Works I neither would nor could hide or keep to my self any longer.

THE

SECOND PART

OF

Miraculum Mundi, &c.

I. *Of the Original of this* Salt.

TOuching the Original of this Salt, I have before shewed which way it should be made of F. and common Salt. Yet I would not have these words be so taken, as if the same could be prepared no other way than this. The methods of preparing it are various; for it may be prepared of G. only, without the mixture of common salt, yea, of allume, sulphur, or common salt, without the addition of H. or without the benefit of the Fire of any other salt. No salt can be found, which is not a commodious matter for this salt of Art; yet it may be collected from one more easily, and more copiously than from another. But because we exhibited one only way of preparing that before, as well for other reasons, as because of want of time, and lest we should be too tedious to the Reader; therefore we now think it convenient to signifie, that these wonderful salts may be prepared, and that they are endowed with special virtues denied to others, which they exercise, as well universally as particularly, in Vegetables, Animals, and Minerals. For, Who can deny that salt to be of another nature, which remains after the Destillation of spirit of common salt, and that which is left in the Destillation of *Aqua-fortis* or *R.* although they be salts of a most diverse nature, of which these are prepared?

Yet every one of theſe is endowed with power of diſſolving and fixing. But that which is made of *Sal Armoniack* volatilizeth all bodies ſo, as the ſouls of them paſs over by Alembick; in like manner a ſpirit ſeparated from *Sal Armoniack*, by the help of C. manifeſts other virtues and properties, than thoſe which are found in the Spirit of common Salt. To one more accurately conſidering theſe, *Arcanums* of great note will exhibit themſelves: But more of theſe elſewhere.

Of the Name of this Univerſal Salt.

ON this Salt we impoſe the name of, *The Univerſal Salt of Philoſophers*, reſpecting thoſe excellent Powers and Virtues, with which it is endowed above any other Salt. We deſervedly call it Univerſal, becauſe it is the higheſt of thoſe Medicaments which proceed from Minerals, Animals, or Vegetables; as in the following Treatiſe ſhall be demonſtrated: Of Philoſophers is added, becauſe the demonſtration of this matter is neceſſarily grounded on Philoſophick foundations.

Of the Virtues of this Univerſal Salt.

TOuching its virtues, they are innumerable, and we judge it impoſſible to diſcover them all; for if I ſhould undertake only to write what I know of the virtues thereof, a whole years time, day and night labouring, would ſcarcely ſuffice. Perhaps GOD will diſcover more to others; perhaps they, who are younger than I, may find what is to me unknown. By me the firſt, by me the Guide is opened to the Searcher an entrance to things more excellent.

My purpoſe is to communicate to others thoſe things, which the moſt Bountiful GOD hath largely conferred on me, for His Honour, and the profit of my Neighbour: I intend, I ſay, to divulge the wonderful Works of GOD, but at this time (by reaſon of various buſineſſes and hindrances) I ſhall only make mention of ſome of the virtues, which I find to be in my *Sal Mirabile*, or Salt of Art, reſerving the more ſpecial explanation of all things to a more commodious time.

This Salt is rightly called Univerſal, becauſe it is the principal Medicament of the three Kingdoms, *viz.* of Animals, Vegetables, and Minerals, and hath power to perfect and augment the ſame. I remember that heretofore I have attributed to Nitre the Dignity of this, and not without reaſon; yet in many things it is inferiour to this *Sal Mirabile*, ſo as it deſerves not to be compared with the ſame. Therefore in no wiſe correſpondent to Verity are thoſe Writings, which teach, That by the help of a certain Corroſive, a tranſparent Salt may be extracted from a Metal, and that ſalt, diſſolvable in water, is the true Salt of the Wiſe. Such Writings are of no other uſe, than to ſeduce the Ignorant by Lyes.

For the ſalt in which a Metal is diſſolved, deſerves no more to be called or eſteemed a ſimple ſalt, but receives the condition of a metallick Vitriol, whether that Vitriol is green or yellow, of *Sol* and *Luna*; or white, of *Mercury*, *Jupiter*, and *Saturn*; or bleWiſh-green, of *Mars* and *Venus*; for what is to be an Univerſal Medicine, extending it ſelf to all Kingdoms, muſt neceſſarily have no extraneous thing mixed with it. This is conſentaneous even to the Judgment of Ruſticks.

The true Univerſal Salt ſhould be partaker of no metallick matter; but altogether pure, and moſt eaſily able to put on the nature of all things contained in the kingdoms of Vegetables, Minerals, and Animals, and ſo exhibit it ſelf a moſt excellent Medicine. And ſince theſe Properties are moſt fully found in our Univerſal ſalt, there is no reaſon we ſhould aſcribe to it leſs Honour, or not preferr it before all ſalts.

Intending to expoſe the Verity of theſe ſayings to all, we begin firſt with Vegetables.

Of the wonderful power of the Univerſal Salt *in the kingdom of* Vegetables.

I Said in my *Miracle of the World*, and the Continuation thereof, that a ſulphureous ſweet ſalt is the moſt excellent Medicament of all Vegetables: The Truth of which no man hath cauſe to doubt; for I have ſhewed in various places, that barren grounds are made fruitful by the addition of that. Of this ſalt, which we may uſe inſtead of Dung, there is great diverſity, for it is prepared of Wood-aſhes, of Stones burnt to Lime, and of other bodies putrefied by length of time. But the Chief of all theſe is Salt-petre, being the ſalt of Vegetables, Animals, and Minerals putrefied, eſpecially becauſe it is endowed with a certain occult and ſweet Fire. Alſo the ſignature proper to it, clearly expoſeth to our ſight its augmentative virtue; for it exhibits not it ſelf in a Cubical form, as is obſerved in corroſive ſalts, (altogether adverſe to the augmentation of Bodies) but Dart-like or acuminate. By this ſignature Nature intended to ſhew of what condition and virtue ſalt-petre is. And indeed, if Experience be conſulted, the things we have propoſed will be found true, *viz.* that in Nitre is a principal Virtue, augmenting Bodies. As for example: R. what Corn you will, ſteep it for a night and day in Rain-water, wherein Nitre is diſſolved, commit it to the earth, and you will find, that it not only ſhoots up more copious ſtalks and ears, and hath a more ſwift germination and ripening, but alſo is endowed with a much more acceptable taſte, than other Corn in the vulgar manner produced by the help of the Dungs of Animals. But of this matter, more at large elſewhere.

Pure Nitre is a ſalt genited in old Stables, from the Dung and Urine of Animals. Urine and Dung are no other than Vegetables themſelves, putrefied by digeſtion in the ſtomachs of Animals; which concoction is wont to be perfected in 24 hours ſpace: But Vegetables and Animals, out of the ſtomachs of Animals, cannot be putrefied without long time, eſpecially when they have acquired ſome undue hardneſs.

Thus

Thus we ſee Putrefaction differs in reſpect of time, yet it acknowledgeth no diverſity; for whether it be made in the ſtomach of an Animal, or out of it, it is all one, and never different in virtues. By this *medium* the Vegetable kind hath its propagation and encreaſe, but altogether in a ruſtical manner, becauſe a better way is not yet known.

Indeed, unto Philoſophers is known a more eaſie and more compendious way of reducing Vegetables, Animals, and Minerals to their firſt matter, or into a ſulphureous ſweet Salt; yet they reſerved the ſame among their *Arcanums*, leſt ſuch a moſt noble Art ſhould be made too common.

As it is altogether impoſſible that the ſeed of any Vegetable ſet in dry Herbs ſhould grow, or Man himſelf, or any other Animal, ſhould be able to ſuſtain Life, encreaſe, or be multiplied, with the only uſe of Sand or Flints; but earth moiſtened with a ſaline liquor, is required, unto which the ſeed muſt be committed; and in Man ſuch Aliment muſt be digeſted in the ſtomach, as will eaſily be changed into nutriment of the Parts: ſo it is impoſſible to augment Metals, unleſs they have been before reduced to their firſt matter, and ſo ſpiritually conjoined each to other, as one may give nouriſhment and encreaſe to the other. All theſe things are far more eaſily and more readily performed by Art than by Nature.

By Art that all Vegetable, Animal, and Mineral ſubjects may moſt eaſily and ſwiftly be reduced to their firſt matter, which is a ſulphureous ſweet Salt; and by that means be multiplied, the true Univerſal Salt clearly demonſtrates; which ſalt, if we obſerve its ſignature or long figure) is not only more excellent than Salt-petre, but is alſo generated eaſily in the air. We have diſcerned ſand or a ſtone to imbibe this ſalt, if expoſed to the air, and from an ingenited virtue thence to grow, yea, and that which firſt grew being taken away, in a few daies ſpace another hath ſhewed it ſelf, and ſo to Infinity. Indeed theſe things ſeem impoſſible, but they are not ſo to him who rightly knows Nature; for that augmentation is effected in a Magnetical manner, of which we do more fully treat in another place.

Hence, not without good cauſe, do we aſcribe to this Univerſal ſalt the title of HERO, and a moſt rich and liberal Monarch.

The PROCESS.

A moſt eaſie Way of acquiring Spirit of Salt *together with the* Sal Mirabile.

R. of common ſalt two parts, diſſolve it in a ſufficient quantity of common water; pour *A.* upon the ſolution; put the mixture into a glaſs Body, or a glaſs Retort well coated, or elſe into an earthen Body or Retort. If a Body, ſet on an Head, and begin to deſtil with Fire of ſand, encreaſing your Fire gradually; with the firſt heat comes off the unſavoury Phlegm, which gather apart; when the Liquor comes forth ſowriſh, change your Receiver, and receive the ſowre ſpirit: Continue the operation till no more ſpirits will ariſe, then let out the Fire, and permit the Veſſel to ſtand in ſand till all is cooled, when cold, take it out, and if it be unbroke, fill it again with the aforeſaid matter, and proceed as we taught: The Phlegm is not to be caſt away, but muſt be kept, that in it may be diſſolved Salt (becauſe it is better than common Water) for another deſtillation. Thus from every pound of ſalt you will have ℔ j. of the beſt and moſt pure ſpirit. Diſſolve the ſalt remaining in the Body or Retort (if neither be broke) in Water, filter and evaporate the Water, let it cryſtallize, the Cryſtals will be white, endowed with wonderful Virtues, to be declared here following.

Note, If the Glaſs be broke, there will be no neceſſity of diſſolving the Salt, it will be enough to take out the dried *Sal Mirabile*, and reſerve it for Uſe.

Note, This deſtillation may be performed in a ſilver Body, for ſo doing, we ſhall be free from all danger of breaking; yet the Veſſel muſt be made of very pure Silver, void of all Copper, leſt thoſe moſt ſharp ſpirits do attract the Copper from the Silver, and ſo the Body become altogether porous and ſoft. Although in the ſalt is no property agreeing with ſilver, yet every deſtillation it raceth off ſome of the ſilver, which that you may ſave, gather the white Powder left in the Filtre, after filtration of the diſſolved ſalt. Dry this Powder, moiſtened with a ſtrong *Lixivium*, and melt it in a Crucible into ſilver; yet you muſt not inſtitute this melting of the ſilver *per ſe*, becauſe it hath acquired ſuch volatility from the ſpirit of ſalt, as it will fume all away.

And although every deſtillation ſome quantity of the ſilver be raced off, yet you may deſtil the ſame matter ſome hundreds of times in the ſame Body, before you ſhall need a new one. Thus we ſhall have the leſs need of Glaſſes, and ſooner perform the deſtillations, becauſe a ſtrong Fire may be given at firſt, without fear of breaking the Veſſel.

A yet more compendious way is, when we ſet the Body alone upon a Trivet, and by putting Fire under it, extract the ſpirit; for ſo we ſhall need no Furnace, unleſs we will, for better conſtringing the heat: Nor will any great quantity of Coals be ſpent in ſuch extraction, becauſe ℔ j. of ſalt may be deſtilled with two or three ℔ of Coals.

This ſpirit being of it ſelf ſufficiently clear, and of a grateful taſte, needs no rectification.

Yea, it is able to effect more than we aſcribe to it in our Writings. Alſo the remaining ſalt effects other incredible things, beſides thoſe we aſcribed to it in our Treatiſe of the nature of ſalts.

Plainly, after the very ſame manner as we have taught ſpirit of ſalt to be prepared, ſo may alſo be made *Aqua-fortis* and *Aqua-regis*. Inſtead of ſalt, take Nitre, and you will have *Aqua-fortis*; and if to a ſolution of Salt and Nitre, equal parts, you add a ſufficient quantity of B. you will, by help of Deſtillation, acquire *Aqua-regis*.

Therefore ſince the infallible *Baſis* and Foundation of *Medicine* and *Alchymy* is C. or elſe D. it is now known to us, which way, and for little Charge, we may produce large quantities of this Medicine; whereas in the vulgar way great Coſts and Labour is required; and the more eaſily we can obtain it, the more abundantly profitable will it be to us, eſpecially when we intend to beſtow time in the tranſmutation of the more vile Metals. Wherefore its principal Uſe is directed to the Preparation of F. as is ſaid moſt eaſily. Hence alſo the ſpirit of ſalt and *Sal Mirabile* may duly be uſed in true Medicine and fruitful Alchymy.

Of a Lyon and Panther is produced a moſt ſharp-ſighted Lynx; yea, of a Lyon and Eagle is genited a moſt potent Dragon, vomiting Fire, flying on high, and carrying up in the air an Horſe, with a man ſit-

ting upon him. Although theſe can do very much, yet they could not preſerve the moſt noble Art of Alchymy from being accounted unprofitable and neglected by evil-minded and ignorant men. Yet at length an unſatiable *Gulo* conſuming all things, being genited of a Dog and a Wolf, reſtored the ſame to a due ſplendour. This dares to demonſtrate the ſpecies of Metals to be mutable, contrary to the opinion of *Ariſtotle*, and by this means plainly ſhew and confirm, that *Alchymy* is moſt profitable, and contemned without cauſe. *Alchymy* ſtands obliged to this, becauſe by the ſame it hath recovered its priſtine and truly royal honours; to this, becauſe it both acquires favour and praiſe.

Of the Utility which our Salt of Art *contributes unto all Men, of what ſtate or condition ſoever they be.*

THE Utility of this is very great, for if ſeeds, before they be ſowed, be ſteeped in it, they will yield an incredible encreaſe; which is a thing of very great concern to all men dwelling on the Earth, becauſe they ſhall never ſuſtain the want of Bread.

And will not the Husband-man, gathering in his Fruits for leſs labour and charge than in the vulgar manner, be able the more certainly to pay his Dues to the Magiſtrate?

Of Artificers alſo the Reaſon is the ſame; becauſe they being hereby better able to exerciſe their Crafts, may alſo return the benefits thereof to their ſuperiours.

Unto Phyſicians, by the help of this, are known more excellent Medicaments, and they being preſent, more ſpeedy and certain relief is procured to the ſick.

So is it with Apothecaries, Chirurgions, and their Medicines, Plaſters, and Unguents, which by this are more perfectly prepared, and therefore the Cure is ſooner, and more happily abſolved, than by Medicines vulgarly known.

And I believe every Artificer and Trading Man, when he can perform his Work with leſs labour and charge, and acquire his Wares for leſs trouble and coſt, will ſell his Commodities to his Neighbours, at a cheaper rate than he could before he found the benefit of this ſalt.

Husbandmen and Gardeners, and other ſuch labouring men, when they can more eaſily, ſooner, and more abundantly reap their Fruits than before, cannot chuſe but ſell to the buyers for leſs price than they could afford them at when they had no benefit of this.

Thus we generally ſee, of how great Utility our *Salt of Art* is, or what benefits may thence redound to men of every condition. What man, conſidering theſe things, will not imploy all his faculties that he may become the Maſter of ſuch a ſalt, whence he may not only benefit himſelf, but his Neighbour alſo?

Of the Uſe of this Sal Mirabile *in Medicine.*

1. THis ſalt ought to be numbred among Univerſal Purgers, for by a Magnetick Virtue it extracts all ſorts of noxious humours out of the Body.

2. This purging Property is augmented by Metallick or Mineral Bodies diſſolved in it.

3. For expelling all depraved humours, the moſt profitable to be diſſolved in it, is Antimony; when the Medicine is to be appropriated to the Heart, Gold; when to the Brain, Silver; to the Liver, Spleen, and Reins, Iron; to the Lungs, Tin and Sulphur; to the Habit of the Body, Copper and Mercury.

4. If purging Vegetables, Minerals, and Animals be boiled in the Water in which this ſalt is diſſolved, and that decoction be uſed in a Clyſter, we know all corrupt humours will be evacuated thereby.

5. In all thoſe Perſons, young or old, which cannot or will not take purging Medicaments, either by the mouth, or otherwiſe, it will be very profitable to free their bodies from corrupt humours, to make ſuppoſitories of Honey and this ſalt mixed.

6. In *Head-achs*, all *Fevers*, and the *Epilepſie*, it will deſerve the praiſes of a ſuitable Purger.

7. In *Catarrhs*, when the Head is full of Phlegmatick Humours, half a grane, or a whole grane of this ſnuffed up the Noſtrils early in the morning, or in the day-time, wonderfully evacuates the Phlegm.

8. It is an admirable Remedy in Affects of the Jaws, and parts adjacent, as the Tongue, Tonſils, Cheeks, and Gums, having their original from a ſharp Catarrh falling down, and oftentimes conjoined with Ulceration and Corruption, as is frequently known to happen in Scorbutick Diſeaſes. For it extracts the humours cauſing the *Evil*, and heals the part vitiated, if it (diſſolved in Water) be often uſed hot as a *Gargariſm*, and the uſe of Purging not neglected.

9. In like manner, in the *Tooth-ach* it performs Wonders, drawing out the Humours cauſing dolour in the Teeth; if as much as will lie on the point of a knife, or ℥j. of it, be applied, tied up in a fine Cloth, to the aking Tooth, yet after the uſe of ſome gentle Purgation.

10. It is a famous Medicine in Affects of the Eyes and Ears, drawing their Original from a *Catarrh*, provided the uſe of ſome Purging Medicine be not neglected.

11. This ſalt is egregiouſly uſeful, and eſpecially after Metallick Bodies have been diſſolved in it, againſt green Wounds of the Body and old Fiſtula's.

12. If it be mixed with a due quantity of common Water, and thence a Bath be made, it admirably clears away the *Scab* and like Affects of the skin, better than natural Baths themſelves; for by its famous power of attracting depraved Humours, lying between the skin and fleſh, and producing ſuch Affects, it heals and extracts the ſame, eſpecially if that power be helped by ſome other Medicine.

13. It extracts Humours of every kind, ſharp, gnawing, or which are moſt firmly inherent in the external parts, or which often produce Vermin like Lice, and cannot be removed by Baths or Unguents.

14. This uſed internally and externally, (*viz.* in a Bath) extracts the Water out of Dropſical perſons; and this it effects ſo much the more powerfully, if Gold be diſſolved in it.

15. It

15. It is a famous Medicine for removing Dolours of the Gout, or diminiſhing the ſame.

16. Inwardly given, it is conducent againſt bloody Fluxes of every kind.

17. Alſo externally applied, it wonderfully ſtops Blood in Wounds, eſpecially if after it is calcined and reduced to Powder, it be mixed with Cobwebbs or Peacocks Dung, or which is better, when Steel hath been diſſolved in it.

18. It kills and expels all Worms.

19. In *Fractures of Bones*, and in *Ruptures*, it is a moſt excellent Medicament.

20. It, diſſolved in Water, and put upon the body, not only preſerves Inſects from Corruption, but alſo greater Animals, and Man; yet it may be uſed in a more dry form.

21. It is an excellent Conditure not only of Animals but alſo of Plants and Flowers.

22. It preſerves bodies diſſected from rottenneſs, ſtink, and dryneſs; contrary to what we have obſerved Turpentine, Spirit of Wine, Aloes and Myrrh to do; yea, from decay, as we have ſeen done in Salt-water.

23. It of Gold produceth an excellent *Elixir*, in a few daies, ſome granes of which uſed either liquid or dry, moſt gently expels depraved Humours by Urine, Sweat, and Seidge. Such an Univerſal *Arcanum* was never before this time known to Mortals; we liberally give it, for the Honour of GOD, and Health of our Neighbour.

24. It ſo prepareth Gold, as by the help of Alcolizate ſpirit of Wine, it paſſeth the Alembick of a golden colour, and is a famous Medicament.

25. Alſo by the help of that (although after another manner) a blue Tincture may be extracted from Gold, of excellent uſe in Medicine and Alchymy.

26. It is able to impreſs the nature of Vegetables on all Metals; ſo as Metals this way prepared, and added to the Roots of Herbs, impart to thoſe Herbs the nature of the Metal applied. How famous the uſe of ſuch Metallick Medicines will be in Medicine, it is eaſie to underſtand.

Of the Utilities of the Salt of Art, *in various ARTS.*

1. IT ſuddenly coagulates River-Water, Rain-Water, or any deſtilled Water, ſo as it becomes Ice, and may be carried in Paper, a Sack, or Wooden-Box or Cheſt, whereſoever you will, and be diſſolved when need is, ſo as the ſalt may be ſeparated from the Water; which ſalt is not at all changed by the Water, but may oftentimes again be uſed for like Coagulations.

2. After the ſame manner Wine, Vinegar, Beer, Metheglin, and like Drinks, may be reduced by coagulation into a clear ſubſtance, and again be moſt eaſily diſſolved.

3. Alſo by help of that may be coagulated ſaline ſpirits, as, *Aqua-fortis*, *Aqua-Regis*, ſpirit of Salt, ſpirit or oil of Vitriol, and the like, ſo as they will become hard ſalts, without any change or corruption, portable in Paper or wooden Boxes, to other places, where being diſſolved when need is, they exhibit a Liquor diſtinct from the ſalt, the ſalt in the mean while keeping its coagulating Virtues intire.

4. To Honey and Syrup it gives the conſiſtency of ſugar.

5. Fountains may be ſo ſtopped with it, as their flowing to be ſtayed.

6. It changeth wood in proceſs of time into a moſt hard ſtone.

7. It abſtracts the ſuperfluous Phlegm from Wine, Beer, Vinegar, and ſpirit of Wine, ſo as they become the ſtronger.

8. It ſeparates the Phlegm from ſubtile Mineral-ſpirits, whence they are made volatile and more powerful.

9. It takes away from Wine, Beer, Vinegar, and ſpirit of Wine, its ungrateful taſte or odour, and unto them alſo gives greater clearneſs.

10. Alſo it corrects the unſavory ſmell of Veſſels, ſo as we may commodiouſly uſe them.

11. It preſerves for a long time all Fruits, as Cherries, Apples, Pears, Grapes, Garlick, yea, Hens-Eggs, and whatſoever may be changed by the air, and otherwiſe would be corrupted.

12. Unto *Painters* it may be a *Baſis* for their Colours.

13. The ſeeds of Vegetables moiſtened in it, are wonderfully multiplied, ſo as from one only grane 10, 20, or 30 ears will ariſe: And the ſame will be effected, if the ſalt it ſelf be committed to the earth.

14. It cauſeth the Earth long to keep the Rain-Waters it receiveth. Hence muſt neceſſarily ariſe great profit to the Fruits.

15. This applied to the Roots of Trees, recovers them, though almoſt dead before, and makes them fruitful.

16. Yea, Animals ſuffocated or drowned in Waters, as Dogs, Cats, Mice, and Inſects, by help of it may again be reſtored to life.

17. It attracts the breathings of many men lying together in one Chamber, and coagulates the ſame as ſnow or ice; not indeed by any reall co-touching, but being included in ſome Glaſs, and hung up by a Thread. Even ſo, in a Magnetick manner have we obſerved ſuch breath or vapour to adhere to the outſide of Glaſs like true Ice. But this is a Winter operation.

18. Flowers and odoriferous Herbs, by addition of this, may be preſerved without change of odour, taſte, or colour.

19. By the benefit of this ſalt, various colours and very many odoriferous ſpecies may be prepared; whence the Roots of Plants, if they be applied to them) attract the colour or odour, which they communicate to the Herbs themſelves.

20. It takes away the bitterneſs of Oil-Olive, rendering it ſweet and clear, better than boiling can do.

21. Linſeed-Oil being mixed with it, is preſently clarified, and freed from its Aquoſity, which otherwiſe cannot be effected in many daies. [See more in the Second Century.]

Of the Use of the Salt of Art *in* Alchymy.

1. IT dissolves and fixeth all Vegetables, Animals, and Minerals.

2. In three hours space it reduceth all the aforesaid into their first matter, whence most excellent Medicaments are made, and whence proceeds a product of Metals, new and more excellent than others.

3. It demonstrates, that in all Herbs, none excepted, there is volatile ☉, and teacheth which way it should be fixed.

4. It adds strength to *Aqua-fortis*, *Aqua-Regis*, and spirit of salt.

5. In a few hours space, it extracts the soul from Gold, so as it ascends by Alembick, and becomes a very excellent Medicament.

6. To the white body of ☉, and of other Metals, spoiled of its soul, it restores the same.

7. In a very short time it reduceth Gold to such an essence, as it may be united with the seeds of Vegetables, and communicate it self to the Herbs.

8. It extracts Gold, Silver, and Copper from Metals most compendiously, and with very great profit, in a dry way, without fusion or any addition.

9. It gives more noble qualities to metals, whilst they are washed in it, so as even by the help of such a Lotion, Iron can join it self with Mercury, yea, become fluid and ductile, like Copper, which is a thing very profitable.

10. It brings imperfect Metals by graduation to maturity, and so changeth them into ☉ and ☽, as well by the dry as humid way.

11. It can ripen every iron into steel.

12. By the help of this, Iron may be changed into Copper, Copper inte Silver, and Silver into Gold, either by the humid or dry way. Also every Gold may be brought to the 28th. degree, yea, to a true Tincture. But of the last I have as yet made no experiment; nevertheless, it seems not to be impossible, because there is no metal which may not be changed into another, and indeed more excellent metal; yea, we know that common ☉ keeping its colour, may be exalted. And although the way of making this Tincture is not yet certainly known, yet there will be some one, that shall succeed us, to whom GOD will grant the knowledge of the same, who shall stop the mouthes of all slanderous and evil-minded men, and discover their malice.

But some one may say, How shall we know this colour of Gold to be true Gold, and not Copper? To him I answer; For this Process neither Copper nor any other Metal is required; only a Vegetable Sulphur with the Salt of Art absolves that. Whence then should the Copper have access to the Gold? To say, from the Vegetable Sulphur, is nothing: for that must be numbred among Miracles. Hence, if that should be Copper, we see it may well be demonstrated, that all Metals yea, and *The Philosophers stone* it self, may be prepared of Vegetables. Which is a saying most nearly correspondent to Truth: for there is no Plant, yea, I say, no Excrement, no not humane Dung, which exhibit not true Gold, or a true Tincture. Therefore this colour, which we find to have access to Gold, by help of the *Sal Mirabile*, and Vegetable Sulphur, argues not Copper, but true Gold. The Elementary Rays of ☉ have passed into Sulphur in the coagulation in Herbs; this, by help of the Salt of Art, is changed into Tincture, when fixed, and added to Gold, becomes corporeal.

From these and the like, we judge the certainty of the Transmutation of Metals to be sufficiently manifest to every one. Indeed many have endeavoured to demonstrate this, but none more clearly than I have done, because this appertains to *Sal Mirabile* only. Therefore let Ignorants cease to gain-say GOD and the Truth, lest they be severely punished.

These, and various such-like Transmutations, may be performed with very great profit; therefore I judge it needless to speak more of them. Occasion of knowing many things offers it self to Posterity, if GOD give the Blessing. For the Utilities of this Salt are daily more and more known to my Disciples, so as it cannot otherwise be, than that all *Europe* by the help of this Salt only, shall see true Alchymy flourish. Whence, and not undeservedly, it is called the *Salt of Art*, or *Elias the Artist*, who entring into the World, should communicate various Arts to the same. Here you now have him, teaching those things which alwaies were accounted impossible.

The World not contented with this *Elias*, must necessarily expect another. The Jews considering the abject state of Christ, esteemed him unworthy the Honours of the before propheſied of *Messias*, altho' with their own eyes they saw very many Miracles wrought by him. If the same happen at this day in this case, what wonder is it? It is very hard to believe, that such a wonderful Salt can be found in most abject Vitriol.

Could such men know the nature of common Vitriol exposed to the eyes of all men, they would easily understand more to be contained in the same, than I have attributed to my *Sal Mirabile*. It is better something should be reserved to Posterity, than all things laid open to our Age. I have begun, let others proceed.

Paracelsus, in that Chapter he writ of Vitriol, saith, By help of this every Iron may be changed into the best Copper; but which way, something more excellent, *viz.* Iron, may be changed into Gold, *Elias the Artist* (which we call the *Salt of Art*) when he comes, will demonstrate, That the occult virtues contained in Vitriol may be more known to every man, what this Author left in Writing, touching Vitriol, I thought good here to insert.

Therefore, since I in this Treatise denominate my *Salt of Art*, *Elias the Artist* long since predicted, some one may properly say, *My* Glauber, *you proclaim your* Sal Mirabile *to be* Elias the Artist; *but in* Paracelsus's *Writings we read, That when he comes, he will teach the way of transmuting Iron into Gold; now shew us which way your* Sal Mirabile *can do this.* I answer, That here is nothing of impossibility, I have obscurely in this and other places shewed; but which way the Operation is to be instituted, I have not declared: because I my self have not as yet obtained a perfect understanding of the same. Nevertheless, that it is possible we have often observed; for Iron hath access to Gold, and so augments it even as it augments Copper.

For when Copper is dissolved in a certain salt, and the solution is poured upon thin Iron Plates, not only the Copper and Iron settle to the bottom, and so becomes Copper again, but also whilst the coction is performing, a great quantity of the Iron hath access to the Copper, so as you take out more Copper than you put in. I bring for a true Testimony of this Experiment,

periment, the Saying of that moſt true Writer, *Lazarus Ercker*, in his Probatory Book, where he ſaith, He had often obſerved, that Iron Inſtruments in length of time were changed into Copper, without any depravation of their Figure. Yet it is credible, that this Mutation is from Spirits, not from Bodies, becauſe Spirits are endowed with a greater penetrative power.

Since the Writings of this man are in the hands of few, I thought good here to inſert what he hath left written, touching the Tranſmutation of Iron into Copper.

Whether Copper *may be made of* Iron.

Courteous Reader,

I *Did for a long time perſiſt in denying, That Iron in Coppery Waters, ſuch as are made of Vitriol, green Tartar, and the like, could be precipitated into Copper; nor could I in any wiſe believe, that any encreaſe could come to Copper, from Iron; but daily Experience hath taught the contrary,* viz. *That in Mines and Mountains of Vitriol, were left Iron Inſtruments, which after long time were changed wholly into Copper. For although precipitation of Copper is made, by the benefit of Iron, yet the ſame quantity of that, as is put in, is not taken out again. Notwithſtanding this, here it is to be obſerv'd, that together with the Copper, which is ſo precipitated, Silver alſo (if any be) ſettles to the bottom. Therefore they ſeem to do well, who for Precipitation of Silver, beſides Copper caſt alſo into the* Aqua-fortis *Plates of Iron: And ſo in one and the ſame Operation, Silver and Copper ſettle to the bottom, and we ſave all, which the ſeparatory Water did contain.*

As it is manifeſt, Copper may be made of Iron, ſo alſo that the ſame may be changed into Gold, is moſt eaſily demonſtrated. That it is poſſible, I have often obſerved, although without profit, becauſe the true way of Operating was then unknown to me.

Iron is not changed into Copper in every ſolution, but in that which is in certain Determinate Salts. For, if you diſſolve ℥ ſs. of Copper in *Aqua-fortis*, and to repreſs the ſharpneſs of the *Aqua-fortis* add a little common Water, caſt in Plates of Iron, or duly inſtitute coction; ℥ ſs. of Copper will indeed be precipitated by the Iron, but the Iron not changed into Copper. The certain reaſon of this, we believe, is, becauſe no Salt having power of Graduation, was added to the *Aqua-fortis*. Of Gold, the reaſon is the ſame, if it be diſſolved in *Aqua-regis*; for the Gold is here found to be precipitated alone, and the Iron not changed into Gold, becauſe of the defect of ſalt convenient for gradation.

But if a ſolution of Copper or Gold be made in ſpirit of ſalt, and Iron caſt into that ſolution, then not only the Copper or Gold ſettles to the bottom with the Iron, but alſo in this ſolution part of the Iron paſſeth into Copper or Gold, becauſe the ſpirit of ſalt more potently acts upon the Iron, and introduceth Tincture better than *Aqua-fortis*.

Although any Iron, as you ſee, may be changed into Copper or Gold, yet no profit is thence to be expected, for commonly ſome part of the Gold remains in the ſolution, and is not precipitated; and which way this may be ſeparated from the Water is not known to all. Therefore it is better to omit this Operation, than to labour and be at charge to no purpoſe: For reduction of this Gold, mixt with the ſolution, experienced men are required, which will do all things with judgment, and are not contented with that only which expoſeth it ſelf to ſight.

Yet I do not in any wiſe think that ſuch gradation cannot be inſtituted without profit. If we can really tranſmute a very ſmall Particle of Iron into Gold or Copper, Why may we not alſo do the ſame in a greater quantity? It is our faults if we do it not, who are ignorant how to uſe rightly Salts of gradation, ſufficiently able to compleat the work. That the way of effecting that was known to *Paracelſus*, I doubt not; yet he would not communicate it to the ungrateful World, but referred the divulgation thereof to the coming of *Elias the Artiſt*, and that not without Reaſon. I doubt not, but that this gradation may be performed with very great profit, by help of my *Sal Mirabile*, or *Salt of Art*; yet I cannot ſubſcribe to it as an infallible certainty. I have other things now in hand to ſpeak of: My Labours and almoſt incredible Charges have diſcovered various ſecrets, which I publickly communicate for the profit of my Neighbour. Other things may be effected in time, by which (Darkneſs being diſcuſſed) Light may be given to the World, and the Miracles of the Omnipotent G O D be expoſed to the view of all. *Here is need of Labour.*

That Gradation of Iron may be made by the help of appropriate ſalts, ſo as to be changed into Copper, Silver, or Gold, our *Sal Mirabile* plainly enough declares, whether the gradation be inſtituted in an humid way, or Cementation made in the dry.

Now it remains, that we demonſtrate, that ſuch gradation may be made by ſpirits, having power of perfecting and fixing, ſo as no conſumption of the Iron be, as we ſee done in the addition of *Aqua-fortis*. It is ſure that the ſame gradation which *Lazarus Ercker* ſaid, he obſerved in the aforeſaid Mountains, is of like condition; and ſince we poſſeſs ſuch Spirits, we alſo, remote from Mountains, may effect the ſame. I cannot believe that any other can (if he would) teach us the way of preparing ſuch ſpirits, beſides *Elias the Artiſt*.

In what relates to me, I ſay, that this gradation of Iron may be the better performed, Copper, Silver, and Gold muſt firſt be reduced into Vitriol, having power to effect gradation, and that indeed by the benefit of the *Salt of Art*. I have more than once, by the help of the *Salt of Art*, changed ſilver or gold into a green Vitriol: I need not ſpeak of Copper, the mutation of which is far more eaſie, yet the other is not very difficult, and indeed in an humid way. For I have not ſeldome (when it happened that the Iron being conſumed, my labour was to no purpoſe) had one end of an Iron Wier changed into Copper, and the other into Gold. If time will permit, for my Friends ſake, and that they may be mindful of me, I will repeat the ſame labour. But the principal thing, which infers difficulty in this Operation, is a too great corroſion of the Iron by the Vitriol.

Note. Beſides this, there are other things, which cauſe difficulty, and ſo render the labour invalid, in the dry way as well as in the humid, *viz.* the aptneſs of Glaſſes to break in the humid, and of Cruci-

bles in the dry way; whence it comes to paſs, that the *Sal Mirabile* cannot be kept in them a due time, but runs out.

The gradation of iron into gold, in what way ſoever made, without gold can very difficultly be perfected; and if a glaſs happen to break, Who ſhall be able to gather up what runs out? The loſs of one gradation, by the breaking of the Veſſel, and outflowing of the Liquor, will ſcarcely be repaired with 5 or 6 other gradations compleated without loſs. Therefore it is beſt to deſiſt from ſuch Works.

Of that Operation, which is performed by the dry way, the reaſon is the ſame. For here the gold, which is added for gradation, is almoſt all loſt, without regard to the breaking of Crucibles, which by that means cannot contain the *Salt of Art* its due time: And beſides all this, the ſubſtance of the Crucible will imbibe ſome of it, and together with the ſame part of the Gold; and, Who can without loſs extract it thence? Yea, we think the Crucibles drink in a greater quantity of the gold, than we acquire by the gradation, although our Work ſucceed well. By Experience it is manifeſt to me, that when there are eight parts of Gold, but one part of Iron in gradation is changed into Gold, which way ſoever the Work is performed. What will it avail to ſpend our time in perfecting thoſe things, the event of which is very uncertain? This is the reaſon why very many with me have refuſed this profitable Operation.

We conſidering the poſſibility of the matter, whether it was poſſible to prevent thoſe difficulties, began to labour, but to no purpoſe, a great while, until at length it pleaſed the Higheſt Giver of all Good things to hear our Prayers, and opened to us the way of preparing ſuch Glaſſes, as (although not luted, are able to bear the vehemency of Fire without coating; and Crucibles alſo we know how to harden ſo, as they will continually keep Metals in Flux. I now hope, if GOD hinder not, for better ſucceſs.

A man not fearing the breaking of Glaſſes and Crucibles, might perform egregious things, this way handling Metals, according to his will inſtituting gradations and fixations, and ſo reduce Metals to due maturity, even as the ſun, by continual digeſtion, ripeneth Fruits: For no man, if he fear breaking of his Veſſel, and loſs of his matter, is able to keep the ſame till its final compleatment in a Glaſs or Crucible.

By the benefit of either of theſe inventions, ſuch things may be effected in Medicine and Alchymy, as before were impoſſible to be done.

Yet let no man ſollicite me (conſidering the great labour and vaſt charge I have expended thereon) to divulge this ſecret. Nevertheleſs, that it may not be buried with me, I purpoſe to communicate that to two of my moſt loving Friends, adding (beſides many other *Arcanums*) a ſuccinct Explanation of this ſecond part of the *Miracle of the World*. It will concern theſe men to uſe the ſame for the Honour of GOD, and good of their Neighbour. I did not this to profit our ſelves, becauſe they are rich enough and I live contented with what I have, but only that the ſuſtentation of the Poor might be chiefly regarded.

Iron may alſo another way be changed into Gold or Copper, *viz.* by the help of fiery ſpirits, which *Salt-Petre* (the Couſin-German of our *Salt of Art*) exhibits, and of which I have very plainly diſcourſed in a ſpecial Treatiſe, not yet publiſhed. That you may ſee the poſſibility, I will declare the matter by example.

Make a Fulmen of Tartar, Sulphur, and Nitre mixt, to this add of the *Minera* (or Ore) of Copper, Silver, or Gold, never expoſed to the vehemency of Fire, but ſtill endowed with its own Sulphur, endowed with power of tinging and perfecting Gradation an eighth part. Put ℥ ſs. or ℥ j. of the mixture into a Crucible at one time, and ſet this Crucible under the Receiving Veſſels of our fifth Furnace, and with a live Coal kindle the Fulmen, and then the Orifice being well cloſed, you will find and obſerve the Gradation of Iron unto Copper, Gold, or Silver, according to the diverſity of matter added to the Fulmen. Here moſt commodiouſly may be uſed Steel-Needles; theſe I have often drawn out of a Crucible, wholly changed into Gold.

Note. He who intends to make Gradation with Gold, muſt neceſſarily apply Receivers, in which he may collect the volatile Spirits of Gold. If a man be contented with a very ſmall quantity, he needs not uſe Receivers, afterward (being firſt aſſured of the certainty of the Operation) he may build a Furnace fit for it. I built ſuch a Furnace, in which the laſt Summer, for my Friends ſake, I performed this Operation.

Note. If a ſufficient abundance of good Metals be wanting, that your labour may not be in vain, it will be requiſite to make the ſame ſpiritual with Salt-Petre, before they be added to the Fulmen. If you would make trial of graduating into Gold, to ℥ j. of the Fulmen, you may add ʒ j. of fulminating Gold (precipitated with ſpirit of Urine, not with *Lixivium*) and your endeavour will have good ſucceſs, if you proceed right.

By help of this Fulmen, all Metals may be changed into Gold or Silver; that is, the true Regal Cement of ancient Philoſophers, which they alwaies kept ſecret; only *Paracelſus*, in his Preface to the Book of Cements, was willing to make ſome ſmall diſcovery; *You muſt not* (ſaith he) *ſo much regard the Ingredients of the Cement, but the way of cementing is only to be conſidered, the Fire only, which is in it, muſt be endowed with power of fixing and graduating*. Yea, in his Book of Vitriol he almoſt ſpeaks the ſame.

But ſome one may ſay, What is that Regal Cement, or what is the way of uſing the ſame? Although this hath been alwaies kept as a Secret, yet I in theſe laſt times communicate the ſame to All. There is indeed no Metal, which may not (even without the addition of any other thing having power of perfecting Gradation) by the help of this only, be turned into gold; as in our work of ♄ we largely ſhew. Yet this Operation is not done with ſo great profit, as that which adds Powders perfecting gradations to the Cement; nevertheleſs it is ſufficient to ſhew the poſſibility.

But that the Doctrine of *Elias the Artiſt* may be more manifeſt by the aforeſaid *Paracelſus*, we thought good here to ſubjoin his own words at large, which take as follows.

THE

THE BOOK
OF
Philip Theophrastus Bombast

Of Hohenheim, *Monarch of Philosophers, Prince of Spagyrists, Chief of Astronomers, Paradoxical Physician, and great Master of Mechanick Secrets.*

TOUCHING

The TINCTURE of Natural Things,

Against Sophisters born since the Flood, in the Age of Our LORD JESUS CHRIST the Son of GOD.

THE PREFACE.

SInce thou, Sophister, *with foolish and lying Words, hast reproached me in all places, because I was born in* Helvetia, *that I am rude, and understand or know nothing; also, that being one Letter more than a Physician, I rove and wander about from one Region to another: Therefore I purpose in this small Treatise to discover and lay open to the World, ignorant and unexperienced men; also that in the first Age good Arts were in being; and what your Art is able to effect against mine and mine against yours, and what is to be judged of either, and how Posterity in the Age of Grace will imitate me.*

Consider Hermes, Archelaus, *and others in the First Age, what* Spagyrists *they were, and how great Philosophers. That they were such, is witnessed even by their Enemies, who are thy Patrons, (or Idols rather at this time) O Sophister. But if this had not been testified by your Authentick Fathers and falsly-reputed Saints; yet the ancient* Smaragdine-Table *discovers more of Art and Experience in* Medicine, Alchymy, Magick, *and other like Sciences, than can ever be taught by you and all your Tribe. If from the Precedent you do not yet understand what, and how great Treasures these be, tell me why no Prince or King was able to subjugate the* Egyptians? *Then why did* Diocletian *the Emperour command all Books of Chymistry (how many soever they were he could come by) to be burnt? For their Books being destroyed, they were long since compelled to bear such an intolerable Yoke, as will in time fall upon the neck of thee and thy Collegues, O Sophister.*

In this Middle Age the Monarchy of all Arts is at length derived to me, Theophrastus Paracelsus, *Prince of Philosophy and Medicine; for unto this am I chosen by GOD, that I may extinguish all Phantasies of devised, putatitious, and false Works, and presumptuous Words, whether they be the Placets of* Aristotle, Galen, Avicen, Mesue, *or any other Follower of them. And my Theory proceeding from the Light of Nature, shall never fail through its unconstancy, nor be changed, but begin to flourish in the* 58*th. year of the following Age. Then the Practice following, it shall be proved by admirable and incredible Signs, so as it shall be openly manifest to Mechanicks and the Common People, how constant and unmoved the* Paracelsick Art *stands against the Trifles of Sophisters; in the mean while that Sophistick Art hath need of Papal and Imperial Privileges, to strengthen and uphold its Impertinencies. But whereas I am by thee, O Sophister, accounted a Beggar and Vagabond, the* Danube *and the* Rhine, *I being silent, shall answer for me to thee. Often hath those impertinently-devised Calumnies of thine against me, displeased many Princes and Earls, also Imperial Cities, Noblemen, and Knights; for I have a Treasure in a certain City of* Forum Julij, *called* Weiden, *hid in the Hospital there, which neither thou* Leo the Roman, *nor thou* Charles the German, *with all your Substance, are able to purchase. Although a signate Star fell upon the* Arcanum *of your Names, yet it was known by none but the Sons of the Divine* Spagyrick Art. *Wherefore since, thou Verminous and Lowsie Sophister, judgest the Monarch of Secrets to be an ignorant Fool and prodigal Decocter, I will now, in the middle Age, openly discover (as an honourable prosecution of those things I have asserted) the Virtues and Preparation of that Tincture, for the profit and honour of the Lovers of Truth, and that the Contemners of true Arts may be reduced to Beggary. The latter Age will be illustrated and honoured with this* Arcanum, *as the Gift of GOD, and manifest Endowment of the true Spirit, so as from the Beginning of the World the like sprout of Understanding and Wisdom was scarcely ever heard of. In the mean while, Vice shall not be able to suppress the Just, nor the Riches or power of those that are evil, be any Damage to the Upright.*

Of Philip Theophraſtus Paracelſus

His Tincture of Natural Things, &c.

CHAP. I.

I *Philip Theophraſtus Paracelſus Bombaſt*, ſay, That (after the manifeſtation of Divine Grace) many waies to the Tincture of natural things, were found out, which did all finally tend to the ſame ſcope and end: For *Hermes Triſmegiſtus* the *Egyptian* ſet about this Work, according to his own Reaſon. *Orus* the *Grecian* obſerved the ſame Proceſs. *Hali* the *Arabian* perſiſted in his own order; but *Albertus Magnus* followed a Proceſs very prolix. Every one of theſe proceeded in his own manner, yet they all attained to one and the ſame end at laſt, *viz.* to long Life, and an honeſt ſuſtentation and Conſervation of the ſame in this vale of miſeries. At this time, I *Theophraſtus Paracelſus Bombaſt*, Monarch of Secrets, am endowed with peculiar Gifts of GOD, *viz.* in ſuch a manner, as every ſearcher of this high natural Work muſt needs imitate and follow me, whether he be an *Italian*, *Polonian*, *French-man*, *German*, or whatſoever he is, and whoſoever he is. Hither muſt you all, Philoſophers, Aſtronomers, and Spagyriſts, how high ſoever you be, come after me. I by my own immenſe Labours, will ſhew and open to you, Alchymiſts and Doctors, that corporeal Regeneration. I will teach you that Tincture, Arcanum, or Quinteſſence, in which the Foundations of all Myſteries and Works are latent: For every man may and ought to give credit to another in thoſe things only, which he hath experienced by Fire. If any one, otherwiſe than by this experience, offer any thing in Chymiſtry, he is not to be believed, becauſe the true muſt be ſeparated from the falſe by Experience in Fire. Aſſuredly the Light of Nature was created for this end, *viz.* that by it the trial or Proof of every thing ſhould appear; yet to thoſe only who walk in that Light. With this Light we ſhall be taught by the beſt demonſtrations, That all thoſe who ever before me entred this ſo difficult Province, with their proper phantaſies and acute ſpeculations, have made trial to their own hurt. Therefore, by my Foundation, many Ruſticks have been made Noble-men; but on the contrary, by the putatitious and opinionative Art of thoſe men, of Nobles, many have been tranſmuted into Ruſticks; becauſe they could bear golden Mountains in their Heads, before they had put their Hands into Coals. But firſt are to be learned *Digeſtions*, *Deſtillations*, *Sublimations*, *Reverberations*, *Extractions*, *Solutions*, *Coagulations*, *Fermentations*, *Fixations*, and every Inſtrument requiſite for this Work, is to be known by uſe, as Glaſſes, Cucurbits, Circulatories, Veſſels of *Hermes*, Earthen Veſſels, Balneums, Wind-Furnaces, Reverberatories, and other ſuch-like; as alſo a Marble, Mortars, and Coals; ſo may you at length proceed in *Alchymy* and *Medicine*.

But as long as you by Phantaſie and Opinion adhere to your Fictitious Books, you will be apt for, and predeſtinated to none of theſe.

CHAP. II.

Of the Definition of the Subject and Matter of the Tincture of Natural Things.

BEfore I come to the Proceſs of the Tincture, it is convenient I ſhould diſcover to you the Subject thereof; for this was alwaies kept ſecret (with a peculiar concealment) by the Lovers of Verity. Therefore the matter of the Tincture (here you muſt underſtand me in a Spagyrick ſence) is a certain thing, which from three paſſeth into, or remains in one Eſſence, by the Art of *Vulcan*. But that I may ſignifie the ſame to you by its Name; according to ancient uſe, it is by many called the *Red-Lion*, but by few known. This, by the help of Nature, and the Art of the Artiſt, may be tranſmuted into a white Eagle, and of one two be made; yet then the golden ſplendour ſhines not ſo much to the Artiſt, for they two kept in one ſhine more. Now, if you underſtand not the uſe of Caballiſts and ancient Aſtronomers, thou art not born of GOD for the *Spagyrick Art*, nor by Nature choſen for the *Vulcanick Work*, nor created to open thy mouth in *Alchymiſtick Arts*. Therefore, the matter of the Tincture is a very rich Pearl, and a moſt precious Treaſure, and the nobleſt thing (next to the manifeſtation of the moſt High) and moſt worthy of humane conſideration, that can be in the earth. This is the LILI of *Alchymy* and *Medicine*, which Philoſophers have ſo diligently ſought, but through defect of intire knowledge, and perfect Preparation, they attained not to the perfect end thereof. By their Searches and Experiences, a Beginning only of the Tincture is given to us; but the true Foundation which my Collegues

ſhould

ſhould imitate, was left to me; wherefore no man muſt mix his Vizors with our Intentions. I, after my long Experiences, deſervedly correct Spagyriſts and ſeparate the falſe or erroneous from the true, having by continual Searches found out thoſe things, by reaſon of which I may juſtly reprehend and alter many and diverſe things. Yet had I found the Experiments of the Ancients more excellent than my own, I would not have ſuſtained ſo great Labours, as I willingly undertook for the ſake, profit, and honour of all good Alchymiſts, *&c.* Therefore, ſince the ſubject of the Tincture is ſo ſufficiently declared, as a more faithful diſcovery cannot, nor muſt be made between two Brothers, I will enter upon the Preparation thereof; and after I have poſited the Experiences of the Firſt Age, I will alſo add my own Inventions, unto which, in time to come, the Age of Grace will adhere, whomſoever thou (*Sophiſter*) from thy own Philoſophy in the mean while ſhalt conſtitute Patriarchs or Principals.

CHAP. III.

Of the Proceſs of the Ancients in preparing the Tincture; and of a more ſhort way found out by Paracelſus.

ANcient *Spagyriſts* putrefied *Lili* for a Philoſophick Month, and then deſtilled from it the humid Spirits, ſo long as until the dry were elevated: The *Caput Mortuum* they again imbibed with the humid Spirits, and from it, by deſtillation, often abſtracted them, and continued this Operation ſo long, as until the dry Spirits were wholly elevated. Then they united the abſtracted humours and dry ſpirits by a Pellican together, 3 or 4 times, until all the *Lili* remained dry in the bottom.

Although the firſt Experience followed this Proceſs before fixation, nevertheleſs our Anceſtors often obtained their wiſhed end perfectly. But they would have had a more ſhort way of coming to the *Red-Lyon*'s Treaſure, if they had learned the Concordancy of Aſtronomy with Alchymy, as I have demonſtrated it in the *Apocalyps* of *Hermes*. Yet ſince every day (as Chriſt ſpake for the comfort of the faithful) hath its proper Care, the Labour of *Spagyriſts* before me was vaſt and great, which now by help of the Holy Spirit aſſiſting, will be eaſed and lightned by my Theory and Practice, and declared to all thoſe, who abide conſtant in their Labours with patience; for I am experienced in the Property of Nature, and know the Eſſences and Conditions thereof, and the conjunction as well as reſolution of the ſame. Which is the higheſt and greateſt thing in Nature, never yet known to Sophiſters.

When the firſt Age had the firſt Experience of the Tincture, *Spagyriſts* of one ſimple made two; but afterward, when in the middle Age that Invention was loſt, their Succeſſors, by diligent ſearch, at length happened on the two names of that ſimple, and with one denomination called it *Lili*, as the ſubject of the Tincture: Then the Imitators of Nature putrefied this matter (no otherwiſe than as Seed in the Earth) for its due time; becauſe before this Corruption, nothing could of it be produced, nor any *Arcanum* diſcover it ſelf; and after putrefaction, they abſtracted the humid ſpirits from the matter, until by the force of Fire they were dried and ſublimed; that this way (no otherwiſe than as the Husband-man waits on the Seaſons of the year) the ſaid ſpirits might come to maturity, as one thing is wont to riſe and fall after another. And laſtly, as after Spring the Summer appears, they incorporated thoſe Fruits and dry Spirits, and brought the Magiſtery of the Tincture ſo far, until it ſhould come to its Harveſt, and diſpoſe it ſelf to ripeneſs.

CHAP. IV.

Of the Proceſs of preparing the Tincture of Natural Things, *abbreviated by* Paracelſus.

ANcient *Spagyriſts* would not have undergone ſo prolix a Labour, and made ſuch tedious Reiterations, if they had learned their Work from my School, and in their labour followed the Rules of the ſame, but would full as well have obtained their end with much leſs Labour and Charge. At this time, in which *Theophraſtus Paracelſus*, the Monarch of Secrets, comes, is the Seaſon of Invention, which was hid from all Spagyriſts before me. Wherefore I only ſay; Take the Blood of a Roſie colour from the Lyon, and the Gluten from the Eagle, which, after you have joined them together, coagulate according to the old Proceſs. Thus you will have the Tincture of Philoſophers, which infinite men have ſought, but very few found.

Whether thou wilt or no, Sophiſter, this Magiſtery is in Nature, and is a wondrous Work of GOD above Nature, and the moſt precious Treaſure in this Vale of Miſeries. If you conſider it externally, it appears to be that which tranſmutes ſome vile thing into another much more noble than it was before. Yet that Miracle is produced by a Spagyriſt, becauſe he had patience, and was not weary, and by the Art of his Preparation did corrupt the vile extrinſecal Body, and from thence raiſed up another and moſt precious Eſſence. If thou haſt learned, or knoweſt any like thing by the light of *Ariſtotle*, or from the Rules of *Serapio*, produce it here, and bring it to light by experience. Now keep the Law of the Schools, as becomes a Lover of Honour, and a Doctor. But if thou knoweſt nothing, or art able to do nothing, Why doſt thou contemn me, as an irrational *Helvetian* Calf, and accuſe me to be a Vagabond Circulator? Art is another Nature, and a peculiar World, as Experience witneſſeth and demonſtrates againſt thee and thy Idols. Therefore the Alchymiſt ſometimes compounds certain Simples, which he afterwards, according to his neceſſity, corrupts, and thence prepares another thing. For ſo, very often of many, one thing is at length made, which effects more than Nature *per ſe* is able to do; as is ſufficiently manifeſt in *Gaſtaynum*, where of *Saturn Venus* is made; in *Carynthia*, of *Venus Luna*; and in *Hungary*, of *Luna Sol*. Not to mention other

Transmutations of Natural things (sufficiently known to Magicians) which bring greater wonders to Light than *Ovid* speaks of in his *Metamorphosis*.

But that you may rightly understand me, seek your Lion in the *Orient*, and your Eagle toward the *South*, which are to be assumed for this Work. You cannot find better Instruments than *Hungary* and *Histria* produce. But if you would deduce that from Unity, through Duality into Trinity, with an equal permutation of either, then you must direct your Journey towards the *South*, for in *Cyprus* thou canst not obtain all thou desirest; yet here we must discourse no farther than at present we have declared. Of these *Arcanums*, which exhibit transmutations, there are many more, although known by few; and should they by the Lord GOD be manifested to any one, the rumour of this Art would not therefore presently break forth, but the Omnipotent, together with it, would give understanding to conceal these and other things, until the Coming of *Elias the Artist*, in which time nothing shall be so hid, as not to be revealed. You very clearly see (although there is no need to speak of this here, which may by some be taken in derision) in the fire of sulphur, is a great Tincture of *Gemms*, which indeed exalts them more sublimely than Nature *per se* is able to do. But this Gradation of Metals and Gemms must in this place be omitted by me, because I have very sufficiently writ thereof in my *Secrets of Secrets*, in *The Book of Vexations of Alchymists*, and in other places. As I have begun our Ancestors Process of the *Tincture of Natural Things*, so I will perfectly conclude the same.

CHAP. V.

Of the Conclusion of the Process of the Ancients, made by Paracelsus.

LAstly, the ancient *Spagyrists*, by a certain orderly augmentation of Fire, long continued, fixed their pellicanate and dry *Lili*, until from blackness, through a change of all colours, it became red as Blood, and with its colour had put on the condition of a *Salamander*. Rightly indeed did they proceed in such a Labour; and it is equal and fit, that every man, who would compass this Pearl, should proceed after the same manner. To declare this more clearly to thee, would be very difficult for me, if you have not in the school of Alchymists learned to observe the degrees of Fire, and also to change your Vessels. If you have done this, then you will see, that as soon as your *Lili* shall be made hot in the Physical Egg, it will with wonderful apparitions become blacker than a Crow, afterward, in success of time, whiter than a Swan; and lastly, passing through yellowness, become more red than any blood. *Seek, seek* (saith the first Spagyrist) *and you shall find, knock and it shall be opened unto you.* It would be an impious and uncomely thing to put Meat into the mouth of so perfidious a Bird. He should rather be suffered to flie out, as I, and all others before me were compelled to do. Therefore follow the true Art; for this will lead thee to the perfect knowledge of That. There is no reason to set down any thing here more amply or clearly than I have already done; let thy *Pharisaick* Schools teach thee what they will, from their own unstable and tottering Foundation, it will not reach their end or scope; but after you shall, as accurately as is possible, have learned Alchymistick Industry, nothing then in the nature of things will be so difficult, but it, by help of this Art, may be manifest to thee. Indeed, Nature her self brings forth nothing to light, which is brought to its highest perfection; as in this place may be seen by the Unity or Union of our Duality; but Man should, by Spagyrick preparations, deduce it to that, unto which it was ordained by Nature.

Thus far have I said enough of the Process of the Ancients, and of my correction of *The Tincture of Natural Things*, as to its preparation.

Now, we having this Treasure of the *Egyptians* in our hands, it concerns us to convert the same to our profit, which is two-foldly offered to us from this Spagyrick Magistery. In the first way, how it may be applied for Renovation of the body; in the second, how it is to be used for Transmutation of Metals: Therefore, since I *Theophrastus Paracelsus* am experienced in both diversly (according as the signs of the Work, both in experience and proof, have appeared better and more perfectly to me than any other) I will describe and propose the same.

CHAP. VI.

Of the Transmutation of Metals by Projection of the Medicine.

IF the Tincture of Naturalists be to be used in Transmutation, one pound of it is first to be projected upon a thousand pounds of ☉ in Flux; then your Medicine will be prepared for transmuting the Leprous humour of Metals. This is a wonderful Work in the Light of Nature, *viz.* that by this Spagyrick Magistery or Operation, that which before was such a Metal, should perish, and become another Metal. That renders *Aristotle*, with his evilly-founded Philosophy, a Fool: The Countrymen in *Hungaria* casting Iron for a convenient time into a certain Fountain called *Zipferbrunnen*, find it consumed into a *Ferrugo* (or Iron scurf) which melted in a strong Fire with Bellows, is presently pure Copper, which never more returns into Iron. Likewise, in the Mountain *Kuttenberg* (as it is commonly called) they strein a *Lixivium* from *Marcasites*, in which Iron is presently changed into the best Copper, highly gradated, and more malleable than other natural Copper. These, and many such like, are better known to simple men than to Sophisters, for these men transmute one species into another; yet these Arts remain for the most part absconded, by reason of the notable contempt of Ignorant men, and also partly by reason of the just Envy of Artificers. In *Istria* I have often brought Venus beyond the 24 (*alias* 38) degrees, so as the colour of Sol could not ascend higher, and it was constant in Antimony, or in the Quartal Examen; this indeed I used in all Cases, as the other.

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Although ancient Artiſts were earneſtly deſirous of this *Arcanum*, and ſought the ſame with very great diligence, yet very few could after perfect Preparation deduce it to its end. For the Tranſmutation of a Minor-Metal into a better, brings with it many difficulties and hinderances; as when Tin is to be tranſmuted into Silver, or Copper into Gold. Perhaps GOD will have the Magnalia of Nature hid from many Men, by reaſon of their Sins. For ſometimes it hath happened, that when this Tincture hath been prepared by Artiſts, and they could not bring Projection to effect, that the ſame (through their neglect and careleſſneſs in keeping of it) hath been devoured by Hens, whoſe Feathers afterward fell off, and grew new again, as I my ſelf have ſeen. This way, by abuſe, through negligence of Artiſts, came Tranſmutation into Medicine and Alchymy. For when they could not uſe that Tincture according to their own deſire, they converted the ſame to Renovate Men, as you ſhall hear more at large in the following Chapter.

CHAP. VII.

Of the Renovation of Men.

SOme of the firſt and ancient Phyſicians in *Egypt*, by this Tincture, lived 150 years. Alſo the Life of many was produced and prolonged for ſeveral Ages, according as we find it clearly recorded in divers Hiſtories, which ſeems a thing almoſt incredible. For its Virtue is ſo admirable, as it extends the ſtrength and vigour of the Body further than is poſſible by Nature, and Conſerves it in that degree ſo firmly, as it lives ſafe from all Infirmities. And although it be grown aged, yet it appears as in a youthful Conſtitution.

Therefore this Tincture is an Univerſal Medicine, like an inviſible Fire conſuming all Diſeaſes, howſoever they are predominant. Its Doſe is very ſmall, but the Operation of it moſt potent. With it, by me, the Leproſie, Venereal Lues, Dropſie, Epilepſie, Colick, Roſy-drop, [*Gutta Roſacea*] and like Diſeaſes, have been cured and healed; alſo, the Wolf, Cancer, *Noli me tangere*, Fiſtula's, and other internal Diſeaſes, more certainly, than can be believed; of which *Germany*, *France*, *Italy*, *Polonia*, *Bohemia*, &c. will give a Teſtimony large enough.

Now, thou Sophiſter, behold *Theophraſtus Paracelſus*, and conſider how your *Apollo*, *Machaon*, and *Hippocrates*, natural Phyſicians, ſought this Tincture for reſiſting Diſeaſes, becauſe all Phyſicians aim at long Life, and by this Univerſal, they, for the moſt part, obtained it, and that very efficaciouſly; and according to their own Arbitriment, named it the Tincture of Naturaliſts. For in all Medicine, what can be greater, than ſuch a cleanſing of the Body, by which every Superfluity in it, is totally eradicated, and tranſmuted? The Seed being ſound, all things are perfect. What profits the evilly founded purgation of Sophiſters, ſince it removes nothing of that, which ſhould be taken away? Wherefore the moſt excellent Foundation of a true Phyſician is, Regeneration of Nature, and Reſtoration of Youth: Then, that new Eſſence, expels all whatſoever is adverſe to its ſelf. For this Regeneration, the Powers and Virtues of the Tincture of Naturaliſts were ſtrangely found out, and until our time uſed by true Spagyriſts, and abſconded as a Secret.

Of VITRIOL.

NAture generates a Salt, called *Vitriol*. This is a peculiar kind ſeparated from all other Salts, poſſeſſing alſo Virtues different from them. Its Virtues are ſo many, and ſo famous, as of right they ought to be deſcribed in this Book. For, a perfect Cure of the Jaundice is latent in Vitriol, alſo of the Gravel and Stone in the Reins or Bladder, of all Feavers, Worms, Falling-ſickneſs, *&c.* And in Conſtipations of the Body, it is a famous Deopilative: In the mean while of other Virtues in this Chapter to be mentioned, I here am ſilent. The Deſcription of this is to be directed both to Medicine and Alchymy. For in Medicine, it is an excellent Remedy; in Alchymy it is profitable for many other things. But the Art conſiſts in the Preparation of Vitriol for Medicine and Alchymy. For Vitriol crude, is no ſuch thing. It is like Wood, of which all things may be made. It is profitable for Medicine of the Body; it profits alſo in Chirurgery, or External Diſeaſes, as the Pſora, Tetter, Hereditary Leproſie, and others; where all other Remedies are ineffectual, and as it were dead to the Diſeaſe. Vitriol aſſaults Diſeaſes of this kind powerfully, and cures them fundamentally. Therefore the true Preparation of Vitriol is in a ſpecial manner to be known by Phyſicians. For its Virtues when crude are other, than when diſſolved; and other when calcined, than when converted into a green, red, or white clear Oyl. This is the condition of it, that as often as it is reduced into another form, ſo often it is made a peculiar *Arcanum*.

This confounds all Apothecaries, and Writers, both *Italians* and *Germans*. For this part is ſuch, as it alone *per ſe* can fill a fourth part of all their Shops, and cure Diſeaſes proportionally. This being preſent, there is no need of ſo many Boxes, Pots, Glaſſes, *&c.* ſet all of a row, and diſpoſed in order in Shops. It concerns a Phyſician, not to take care for ſo many Boxes, and Beyond-Sea Medicines, but to be circumſpect, provident, and wiſe as a Virgin; ſince in ſuch numbers of Veſſels adulterate Remedies are for the moſt part contained. If he uſe the aforeſaid circumſpection, at his own doors he will find more choice Remedies, againſt all Diſeaſes, than *India*, *Egypt*, *Barbary*, or *Greece* can afford.

Let every Phyſician follow this Baſis, for it is now known even to plain Country-men, that meer Frauds are contained in thoſe Boxes: Which, as they are for the moſt part of Wood, ſo are they that uſe them Wooden Doctors and Apothecaries: But like with like do very well agree.

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Of the Species of Vitriol.

THere are many Species of Vitriol, for they vary according to the Pits out of which they are taken. The common Probation of this is, as Coperas is proved upon Iron, but this is not true. The Genuine Probation is, that it be uſed crude againſt the Worms, in that manner as we will now explain; and accordingly as it expels Worms, ſo is it more or leſs excellent in Medicine. In Alchymy, another Probation by Cuproſity is more available; yet it may alſo be thus proved: If Vitriol change Iron into Copper, and that ſpeedily, and the ſame be perfectly well gradated and ſoft under the Hammer, then is that Vitriol beſt in Medicine and Alchymy. For there is a Conjunction of Iron and Vitriol, where of Iron it makes Copper good and excellent. Of the beſt Vitriol the beſt Copper is made. Let no man wonder, that Copper can be made of Iron by Vitriol; for there is alſo this virtue in Nature, *viz.* that the Water of Borax makes Quick-ſilver of Lead. Alſo experience teacheth, that *Cachymia's* tranſmute all Metals into other, no otherwiſe than as Vitriol changeth Iron into Copper. Nor is Vitriol, only the tranſmuter of one Metal into another, but there are alſo other things, which have like effect upon all Metals. The reaſon why we know not them all, is, becauſe Sophiſters pervert Arts for their private benefit, uſing them only to ſupply their Purſe and Kitchin.

In *Hungary* is a River proceeding from Vitriol, or *per ſe* conſiſting of Vitriol, not coagulated into Cryſtals. If Iron be put therein, and left for its due time, it turns to a Rubigo, or Ruſt. If that Ruſt be melted by a Wind-Furnace, it is preſently made pure and conſtant Copper, not convertible into its own Nature of Iron. There are infinite Mines of Vitriol found throughout *Germany*, all which cannot be deſcribed apart. Yet the aforeſaid Probations are to be uſed both in Medicine and Alchymy. There is beſides theſe another Probation (not profitable in Medicine, but in Alchymy only) and that is: If the Colcothar of Vitriol do from it ſelf by Fire, give or yield Copper. If it give Copper, then in Medicine it is weak, but in Alchymy ſtrong Vitriol. Likewiſe the Colours of Vitriol are to be obſerved: That which is all over blue, mixed with no other Colour, is not ſo good in Medicine, as that Vitriol, which is (as it were) parted, and all over filled with red and yellow Lines and Veins. What in the Air inclines to whiteneſs, is efficacious, and fit for the green and white Oyl of Vitriol: what turns to a redneſs and yellowneſs is more excellent for the red Oyl. There needs no more to be ſaid touching the Species of Vitriol, than what is ſuggeſted by Probation; which every Phyſician and Alchymiſt ſhould make, according to the uſe he intends it for. Laſtly, this Probation is never fallacious. If mixed with Galls, or Oak-Apples, it makes good Ink, then it may be uſed in all Caſes: But if it maketh an aqueous, or wateriſh Ink, that needeth many additions, it is not ſo good.

Of the Virtues of Vitriol *in Medicine: firſt, of it Crude, and its Colcothar.*

IN explaining the virtues of Vitriol, I will firſt ſpeak of the virtues of it Crude, and of its Colcothar. Therefore, know ye, Vitriol is a famous Purgation, in grievous and difficult Diſeaſes of the Stomach. For it ſometimes happens, that the Stomach is diſtempered by Meats and Drinks, and falls into a Diuturnal Diſeaſe, which continues unto death, and by depraved Meats and Drinks, it often comes to paſs, that the Sick are either contracted in their Members, or die.

Alſo among Souldiers, through Immoderation, it frequently happens, that burning Feavers, Dyſenteries, and other Diſeaſes ariſe. In all theſe Evils, the higheſt, and moſt excellent Remedy is a Purgation by Vitriol, which rightly and Allegorically is called *Gryllum*. Its Doſe is as much as you can take up at ſix times upon the point of a Knife. If that Operate not, repeat the ſame Doſe, and if not this Doſe neither, give it a third time, and it will be ſufficient. To the Weak, give it in Wine or Water; but to a ſtrong Man, that is not eaſily Laxative, in rich Wine. It ſo exhibited, will throughly purge upwards and downwards. Indeed Hellebore, both the Spurges, Coloquintida, *&c.* do famouſly purge alſo; yet not with virtues equal to Vitriol. The Reaſon of this is, becauſe in Vitriol is a certain ſowreneſs, which hath a conjoined Sharpneſs, Acrimony, and Deterſion; by which ſaline ſowreneſs the Operation obtains a full and perfect power, which neither Hellebore, nor Coloquintida, *&c.* hath. For the Nature, or way of Purgation is here two-fold: One purgeth *per ſe*, the other by Saltneſs. Therefore here the two virtues are better than the only one in Hellebore. In Saltneſs a Specifick Form is latent, and that of ſuch a Nature, as all Worms touched by it die. And that is a ſingular power, which deſtroys Worms, being what none of the aforeſaid doth. Therefore it is evident to every one, that a Purgation, which hath in it ſelf ſowreneſs and ſaltneſs, together with a Laxative virtue, doth in a double way and manner exquiſitely cleanſe, evacuate and purge. Wherefore, for Internal Diſeaſes, it is twice more noble, and more excellent than other Purgations. But becauſe I intend at large to declare to you the Nature of Vitriol, there is no need I ſhould alſo explain thoſe Internal Diſeaſes: Yet in general I ſay, that a Purgation of this kind in all Vices of the Stomach, in the Falling-Evil and Vermination, is moſt profitable and moſt ſafe, if it be uſed according to the condition of time, Diſeaſe, Perſon, *&c.*

Touching Colcothar you are to know, that it is not inwardly to be taken, but only to be applyed in Chirurgick Diſeaſes, *viz.* in putrid Ulcers, which admit not of Sanation: For in theſe it diſcovers the way to perfect healing. Yet there are many Chirurgick Diſeaſes, as Grievous, Malignant, Worſe and Worſt. Againſt the Worſe and Worſt, Colcothar is not conducent, yet is effectual againſt thoſe, which conſiſt in the firſt degree; and therefore to be applied to them. For the Worſe and Worſt of all, its Oyl is to be uſed according to the degree of the evil, and of the Oyl. All Ulcers of this kind, how many ſoever they be, are cured by Vitriol; but according to the degree, the uſe of it is, that it be reduced to good Colcothar, which

muſt

muſt be certain times extinguiſh'd in Vinegar; and being dry, be ſprinkled on, or permixed with ſome Plaſter, which by the Phyſician ſhall be judged apt and fit for that evil. So it makes an Eſcar, which taken off by Fatneſs, a good and eaſie Cure follows. But the Evil, which is not obedient to this Cure, of it you ſhall thus judge, *viz.* that there is yet more venom latent, which muſt thenceforth be ſearched out with Oyls applied; becauſe the Baſis of the Ulcer cannot ſufficiently be amended with Colcothar for an intire Sanation. If crude Vitriol be diſſolved in Vinegar, and the Solution thickened with Colcothar into a Powder, and ſo applied, it ſoon cleanſeth the bottom of the Ulcer much more potently, than of Colcothar is ſaid. But the beſt way of reducing it to Colcothar, is to extract the water thereof, and therewith to imbibe the *Caput mortuum*, until it be conſumed, afterwards to dry it leiſurely in the Air. If this be uſed, it induceth a better bottom in Ulcers. But whatever you do, mind the degree of Ulcers, Tetters, *&c.* Whatſoever of theſe is not cured, ſet about the Cure of, with its ſeparated Oyl and Water of which afterwards.

Although Colcothar anſwer not the deſired end, yet by reaſon of that the Cure muſt not be deſpaired of, but you muſt think of correcting it in diſtilling. For by Preparation the Medicine is brought to the higheſt degree, ſo as it even cures all Ulcerous Affects, as the Wolf, Cancer, and the like. Theſe are explained more at large where we ſpeak of the Preparation of them.

Of the Water of Vitriol *in Chirurgick, and Internal Diſeaſes.*

ALchymy diſcovers many excellent Arts to Phyſicians; by which, wonderful Sanations of many Diſeaſes are made. For this cauſe in the beginning of Medicine, Phyſicians always uſed Alchymy; becauſe this was the Mother and Genetreſs of many Commodities. Theſe two Faculties, [*viz.* Medicine and Alchymy] as *Sociates* ſo long kept together, as until Deceivers and Humoriſt Sophiſters aroſe, who mixed Venom with Medicine, and made her a Strumpet. Such Medicine as this, will always remain, as long as Humoriſts live. Theſe things I thought good to premoniſh you of, that henceforth you may give the more diligent heed to this head Chapter, by reaſon of its famous Medicinal Utility.

But this is always to be premiſed, *viz.* That as often as unskilful Men take in hand any Art, ſo often do they every way defile and corrupt it, and of a Pearl make a ſtinking Puddle. The very ſame is alſo committed in Vitriol. At firſt, the Spirit from Vitriol extracted, was wont to be gradated to the higheſt. By this exalted, the Ancients did perfectly cure the Falling-Evil, whether Recent or Inveterate, both in Men and Women, of what Condition ſoever they were. But here unskilful Laborators ruſhing in, attempted otherwiſe to reduce the Virtues of Vitriol, and thus failing of the firſt way and *Arcanum*, they ſuffered that to expire, and then ſought an Oyl in the Colcothar, which could not any way be made to that end, or have ſuch a Uſe. For what is to take away the Epilepſie muſt have a ſubtile, ſharp, and penetrable Spirit.

In that conſiſts a faculty of piercing through the whole Body, and of leaving no one thing untouched therein. And by that pervaſion, or penetration, the Diſeaſe is aſſaulted in its own place. For it cannot be known certainly and indubitately, whence comes the Seat, or Centre, or Period thereof. Hence we conclude, that a Phyſician hath only need of ſuch Remedies, as can penetrate the whole Body. This is the Reaſon, why ſordid Humoriſts heal none, but proſtitute all their Doctrine and Profeſſion. Therefore, I poſitively affirm, that in the Oyl, which thoſe Laborators ſeek, is no penetrating Spirit. A meer Terreſtreity (as I may call it) is by them uſed, which penetrates not at all, but where it falls there it lies. Wherefore it is greatly to be bewailed, that the true Proceſs is ſuppreſſed by that unskilfulneſs, and a falſe ſubſtituted in its ſtead. But I am perſwaded, the Devil contrived that, to the end the Sick ſhould not be cured, and the Sect of Humoriſts might thenceforth ſpread the more.

Let us return to the beginning; how the Spirit of Vitriol was found out. The Humid Spirit of Vitriol was at firſt diſtilled from its Colcothar; then it was gradated, by diſtilling and circulating *per ſe*, as the Proceſs teacheth. This way the Water began to be uſed for many Diſeaſes, both Internal and External; as for the Falling-ſickneſs, *&c.* and thus a marvellous Sanation was effected. But in the extraction they were wonderful diligent; for they took the Spirit of Vitriol corrected, as above, and diſtilled it from Colcothar eight or ten times, with a moſt ſtrong fire; ſo the dry Spirits were mixed with the Humid Spirits, and the Work ſo long continued, as until the dry Spirits came forth together with the Humid, by extracting. Afterward, both Spirits put into a Phial were gradated to the higheſt. This Medicine they found to be of much more powerful Operation againſt Diſeaſes, and by that Medicament effected ſo much, as they confounded all Humoriſts in General. Yet here is no Correction added to it (by Artiſts) by Spirit of Wine, to render it of greater Penetration. But it was of no greater degree, than as I ſhewed.

Now I will Communicate to you my Proceſs, which I commend to all Phyſicians, eſpecially for Cure of the Falling-Evil, the ſingular Cure of which, conſiſts in Vitriol. For which cauſe, Charity to our Neighbour binds us to inſtitute a more diligent Cure in this Diſeaſe. The Proceſs is thus.

I imbibe the Vitriol with Spirit of Wine, and afterward diſtil it from the dry and humid Spirits: This being done, I find the following Addition to be very profitable, *viz.* If Spirit of Tartar, corrected, be mixed to a third part of the Vitriol, and Spirit of Treacle-water Camphorate, be added in a fifth part, with reſpect of the Vitriolate Spirits. Thus I adminiſter it, before the aſſault of the Fit, or certain times in a day. This Medicine is famouſly efficacious againſt this Diſeaſe; yea, ſo excellent, as a better cannot be deſired from Nature.

Therefore, the firſt Proceſs invented by the Ancients, is to be retained with the ſaid Correction, *viz.* by imbibing with Spirit of Wine before diſtillation, and by adding the Spirits of Tartar and Treacle-water after diſtillation, as is ſaid. For ſo is attained the Heart of Nature, and every Virtue.

I hope I ſhall not be blamed, but commended rather by every good Man, that conſiders the horridneſs of this Diſeaſe, which would even move a ſtone to Commiſeration. Since ſo great is the vehemency and horridneſs of this Diſeaſe, as almoſt any Man may lawfully ſay, Curſed be all Phyſicians, who paſſing by ſuch Sick, yield them no relief, but like the *Prieſt* and *Levite* in *Jericho*, who forſaking the wounded man, left him to be cured by the *Samaritan*. I pray here give your judgment, what Condemnation were that *Prieſt* and *Levite* worthy of, who paſſing by the diſtreſſed, *ſtopped their Noſe*, as the Proverb is; ſurely they were worthy of Hell Fire, from which is no Redemption.

And who can judge any other of all Phyſicians, none excepted, that look upon this Diſeaſe, and yet paſs by with their Noſe ſtopt? Who can otherwiſe ſay, than that they muſt render an account of it at the laſt day? Notwithſtanding, all theſe men are generally ſo diſpoſed, as they will not wag their hand, or beſtow one penny, for acquiring a more certain Foundation for the cure of this Diſeaſe. Did they not, as it were, by compact imitate *Prieſts* and *Levites*, but would rather ſtudy to imitate the *Samaritan*, GOD certainly would recompenſe their fidelity with a manifeſtation of the Secrets of Nature, with which they might be helpful to the Sick. And if ſuch Virtues were not incited in Nature, the Almighty would undoubtedly create them anew. Therefore I teſtifie, together with you noble and ignoble men, that all Doctors generally have baſely erred and deviated from the Truth. Whatſoever thoſe Seducers, *Galen*, *Avicen*, *&c.* fooliſhly deviſed, to that they adhere, and relie upon thoſe Lyes, ſo far are they poſſeſſed with the Devil, that they cannot exerciſe Charity towards their Neighbours; and in this manner they make themſelves the Sons of Damnation; for their only ſtudy and drift is to heap up Wealth. The Kingdom of GOD is firſt of all to be ſought, yet not after the faſhion of the *Prieſt* and *Levite*, but according to the *Samaritan* nature. If we be merciful, and follow the example of the *Samaritan*, GOD is with us, who will preſently help us with a Remedy not yet created in Nature. In the mean while, ſince Phyſicians deal with the Sick *Levitically* and *Prieſt*-like, the moſt Wiſe GOD withholds Medicine, and reſerves it to himſelf. The Sick flie to the Kingdom of GOD, but Phyſicians to the Infernal Abyſs, prepared for *Levitical* Doctors of the ſame ſort. Therefore open your eyes and look, the way is two-fold, one leads to infernal ſhades, this the *Levites* follow; the other way leads to Heaven, unto which the *Samaritan* directs his Feet.

That Vitriolate *Arcanum*, and its extraction, is not only excellent in the *Falling Evil*, but is alſo conducent in other ſpecies like unto it, as in *Swoonings*, *Extaſies*, *&c.* Alſo it is after the ſame manner beneficial in all Oppilations and inward Impoſthumes, and is no leſs efficacious in precipitation and ſuffocation of the Matrix. Yet in it are many more Virtues acquirable than are here commemorated, if greater diligence in inquiring be beſtowed thereabout, and Phyſicians themſelves would be better men. But the Devil, whom they ſerve, poſſeſſeth them, and ſtirs them up to the hating of Him who loves Verity. Even thus things are acted about the Health of Good Men.

It is further to be known, that the aforeſaid Receipts of the preparation of the humid ſpirit of Vitriol cannot more clearly be deſcribed; for to underſtand that, a ſufficient Artiſt is required; thoſe ſordid Decocters cannot underſtand a thing of ſo great moment. Therefore you are only to expect all-ſufficient Information from true *Artiſts*, and *Alchymiſtick Laborators*; ſo alſo by them you muſt be fully inſtructed about the correction of ſpirit of Wine. For the Doctors of Academies are ſo very rude, as they can ſcarcely diſcern *Agarick* and *Manna*. Yet this kind of Aſſes are created Doctors. You have Treacle-Water contained in my practice, in the Chapter of the Cure of the *Falling-Evil*; what others there are of this kind, are not here to be recited. By this Chapter you may learn, That the Art and all Virtue of Vitriol, conſiſts in well-extracting the Spirit, and graduating it to the height, and by addition deducing it to Penetration, whereby it may ſearch out the center, root, and ſeed of the Diſeaſe. For 'tis impoſſible ſo exquiſitely to find the places, as thoſe Doctors babble of Humours. Certainly, the Foundation is not yet known, as what it is that makes a Diſeaſe, or where that lies, or what that is, which caſts a man into ſo grievous a Fit. Therefore every Operation is only to be committed to that *Arcanum*, which Nature hath directed to the Diſeaſe; that *Arcanum* ſearcheth out his Diſeaſe, as the Sun penetrates all the Angles of the World. Briefly, I ſay, whoſoever endeavours to be a true Phyſician, ought firſt of all to learn to be a *Samaritan*, not a *Prieſt* or *Levite*. If he be a *Samaritan*, all things he hath need of will be given him; nothing will be occult to, or hidden from him. But to him who will firſt be a *Prieſt* or *Levite*, nothing will be given, unleſs it be Infidelity, which he alſo had before. Thus are ſuch men paid in their own Coin.

Of the Red Oil of Vitriol.

YOU are alſo to underſtand, how of the *Colcothar* by a Retortive Deſtillation, in a Chymical manner, a blood-like and moſt ſowre Oil may be prepared. This Oil Laborators have judged more efficacious in the aforeſaid Diſeaſes than the Spirit, but that their judgment was erroneous. The vulgar Proceſs of preparing it I think not to mention here; for every thing of moment is cited in manual Operation and diligent Inſpection, alſo in convenient Inſtruments. As touching the Virtues you are firſt to underſtand, that it is a ſowre thing, ſo far exceeding all ſowreneſs, as nothing than it is more ſowre. It likewiſe contains a corroſive nature, for which cauſe it had need be uſed circumſpectly and warily, *viz.* not *per ſe*, but in a good Concordancy and ſuitable mixture, with reſpect to that againſt which it is exhibited. We will explain this by Example: The Viper is a Serpent moſt venomous, therefore of no uſe alone, but in Compoſition it is moſt excellently uſeful; for of it Treacle is made. The very ſame is alſo to be judged of this Oil, *viz.* That it is not to be uſed alone, but

but in a Compoſition ſuitable and fit, as of Treacle we have ſaid. By reaſon of its ſowrneſs, it profits a Stomach free from Choler and an Impoſthume; but if either an Impoſthume or Choler be preſent, it is manifeſt by Experience, that it hath no good effect. For the Impoſthume is inraged by it, and exaſperated by ſuch ſowrneſs, paſſeth into an unquiet matter. And if Choler be preſent, a mutual Ebullition and Strife is cauſed, no otherwiſe than as is ſeen between *Aqua-fortis* and *Tartar*, neither of which can remain or perſiſt with the other. Therefore diligently and circumſpectly conſider, leſt you erre to the damage of the Sick. In Compoſition this Oil is profitable for other Affects, as in all Fevers and want of Appetite, if given in the aforeſaid manner, *viz.* in a good concordancy. There are many other Virtues ſaid to be in this Oil, but Experience confirms few of them. I have ſeen and proved thoſe to be egregious Lyars, who have boaſted, that they could do Wonders with this Oil. It is true, it is uſeful in the *Stone* and *Gravel*, yet I have known no man cured by it. In all it doth ſomething, but not to purpoſe: Yet in my Practice, in the Chapter of the Cure of *Gravel*, you ſhall find a Compoſition thereof, for this and other diſeaſes. But as I ſaid of the Corroſion of this Oil, uſed by it ſelf, ſo I do alſo affirm, that the ſame Corroſion hath power of diminiſhing or breaking the *Stone*, and expelling *Gravel*; yet that is done with ſo great difficulty, as there is need of ſome other Invention, than hath hitherto been practiſed; for otherwiſe it may not ſafely be uſed. As much as any man hath gained by Experience, ſo much I allow of. This Medicine is new; wherefore it daily ought to be proved anew, and as oft as need is permixed with new Compoſitions.

But as to Chirurgery, of this Oil you are to note, It doth indeed excite great dolours, yet it inferrs preſent Health, even in the moſt difficult diſeaſes. For in the Hereditary Scab of the Head, called *Achores*, it is ſo effectual, as it takes the ſame off in one whole piece, as a Man pulls off an Helmet from his Head. With this Oil the whole Head is to be anointed with a Feather, where it is hairy, for 3 daies continually; then expect its Operation. If you ſee it not ſufficient, anoint it more often, according as the Scab ſhall be. The ſame Oil may alſo be co-tempered and mixed with Water of *Selandine*, and the Head often waſhed therewith. Yet he who would be healed, muſt not think that his Cure can be effected without dolour; for the condition of the Sick is the ſame as of a pregnant Woman, which brings not forth without exceeding great pain. So Meat, without pain, cannot be prepared for us; with dolour and ſweat alſo we are freed from diſeaſes. This way all *Tetters*, *Scabs*, and *Itch*, together with all other Vices of the skin, howſoever ariſing, are healed; and likewiſe the depraved *Tentigo*, by anointing herewith, is cured, and the *Wolf* and *Cancer* expelled and mortified; yet in this caſe you muſt diligently obſerve, if the Evil be very forcible (that the Venom ſo deeply penetrate, as the quick and ſound fleſh be in ſucceſs of time like to be eaten away and fall off) to apply a good *Oppodeloch* for a defenſive.

But in whatſoever eſtiomenous Ulcers, other Remedys be deficient, this Medicine yields relief, by reaſon of the degree it holds. It will not be improper to mix this Oil with ſome fat Unguent, and ſo apply it. This way it will cauſe leſs pain, but it is not ſo ſwift in operating: *Dolour* can by no means be avoided, no more than a Woman in Travel can be delivered without pains. The beſt, and moſt ſublime way of preparing this Oil, is to deſtil it into ſpirit; ſo a very ſmall weight will be ſufficient in all the aforeſaid diſeaſes, which are then removed with little trouble.

Theſe things I have found out by experience of the Red Oil of Vitriol, which in grievous diſeaſes is an excellent and famous Medicine; for fetid and contagious diſeaſes of this kind, as are the *Scab*, *Itch*, *Tetter*, *Achores*, and other like Affects, which are of affinity to the *Leproſie*, may be cured by this great Gift of Nature, which is here offered to the Phyſician, by which he may effectually cleanſe and heal diſeaſed men. There is not an abundance of Remedies of this kind, therefore I will carefully preſerve this Oil, *&c.* for all other Coctures are nothing worth, nor do they remove theſe loathſome diſeaſes, but with their fatneſs do cauſe them to be reincrudated and encreaſed.

Of the White and Green Oil of Vitriol.

IT is worthy of conſideration, that from crude Vitriol an Oil is deſtilled by deſcent, ſometimes white, and ſometimes green, according to the condition of the Vitriol. This Oil deſerves a ſingular commendation; for ſince it is prepared of crude Vitriol, therefore it alſo contains the ſpirit of the ſame, touching which I have above treated. This Oil, made by deſcent, demonſtrates by thoſe its Virtues that it is an excellent and admirable Remedy for the before-mentioned internal diſeaſes. The ſame Oil whether it be white or green, (but the green is better) if circulated and mixed with the above-commemorated ſpirit of Vitriol, is a certain and indubitate Remedy againſt the Falling-Evil, and all its ſpecies. But it is worthy your obſervation, that this diſeaſe is ſeldome ſo ſolitary, as not to have other Evils concurrent with it. Indeed, that ſuch a concurrency is, is evidently manifeſt by all diſeaſes. Hence it is now clear, that a Remedy againſt the principal Evil is not ſufficient, but Secrets againſt concurrent ſymptomsare alſo required. For this cauſe in my Practiſe I have deſigned a peculiar Chapter of the Falling-Evil, not for the principal Remedy ſake, which in this place is ſufficiently deſcribed, but only for the underſtanding of thoſe things, which concurr together with the firſt Affect. If other Accidents do not concurr together with the firſt Affect, there is no need of exhibiting other Medicaments than the principal, which is ſufficient. Therefore, touching the green Oil, thus do ye: Graduate it to the higheſt, that it may be ſeparated from its terreſtreity and fæces, in *Balneo* firſt, afterward in dry Fire. So in *Balneo* the phlegm is taken away, and the terreſtreity removed by dry Fire, and the ſpirit of the Oil only is collected, which in it ſelf is circulated. Afterward you may make addition with ſpirit of Wine, but there is no need of adding more, if it be only to be uſed as a Primary Remedy, without Medication of coherent diſeaſes.

It is to be given in Water of Pæony, alwaies before the coming of the Fit, whether it be frequent or seldome, *&c.* Therefore mind the Paroxisms. As soon as the spirit of the Oil finds out the center of the disease, then the Fit is pacified, and thenceforth waxeth more and more gentle. But when it exerciseth a power of Healing, it first of all excites a *Vertigo* sensible to the Sick, who notwithstanding do not fall nor foam, nor are shaken, or quake, nor deprived of reason, but are seized with a gentle sleep, and are much better presently. At length the *Vertigo* also ceaseth, and the sleep is ended; yet in the mean while the Medicine must continually be applied, several times reiterated, according to the condition of the Disease and Patient. This way the Cure is to be followed, and all things diligently administred. This belongs not to a drunken Physician, or *Doctor Levite.*

Of the Vitriolate Oyl *to be used in* Alchymy, *and also of the Crude.*

NOw to speak of the Alchymistick Virtues absconded in Vitriol: I will first propose to you the Virtues of Crude Vitriol: How every Crude Vitriol of Iron makes Copper. For the Alchymist doth not this, but Nature, or Vitriol, by the Operation of the Alchymist performs the same. And this is the sublime power of Nature. And in the light of Nature it is done, but not without admiration; to see any Metal, as it were put off it self, and become another; which is almost, as if of a Man, a Woman should be made. But in these things Nature hath her singular Privilege granted by GOD, for the sake of Man. I speak this of Transmutation, that you may understand, that the foolish Philosopher *Aristotle*, was not well grounded in his Philosophy, but was meerly fatuate. Now I will give you the Receipt, that you may know how, in all places of *Germany*, to make Copper of Iron; whence we may easily gather, what the power of Transmutation is, and that many other Transmutations may be made; although they as yet be unknown to Us.

To change Iron into Copper is not of so great moment, as to turn Iron into Gold. Therefore, what is least, GOD manifests, but the greater is yet hid, until the *Elias of Sciences* shall come: For Arts also, want not their *Elias.* The Receipt of this Transmutation is thus.

R. Of the Scales, or Filings of Iron (without all other Metals, as Copper, Tin, *&c.*) ℔ j. Quick-silver, ℔ *ss.* Put both into a large Iron Pan, or Pot, and pour on them one Measure of Vinegar, and of Vitriol ℥ *iiij.* Sall-Armoniack, ℥ *j. ss.* Boil them together, and continually stir them well with a Wooden Spatula. If the Vinegar vapour away, pour on more, and add new Vitriol.

By this Decoction, Iron is changed into Copper: If it be made Copper, it all passeth into the Quick-silver, the boiling being continued for ten or twelve hours. After the Cocture is ended, separate the Quick-silver from the Iron (as much of it as is left) and well wash it, that it may be clean. Put that Quick-silver into a Bag made of Leather or Cotton, and press it out; so you will see an Amalgama left. Suffer that Amalgama to expire by Vulcanick Heat, and you will find pure and good Copper. Of this Copper, *R.* ℥ *ss.* of Silver as much, make them flow, or melt them together, and the Silver will presently ascend to the sixteenth degree. This way you may prove, that such Copper is made of Iron: But that the degrees are fixed, is not true. Yet he, who in Regal Cement is able well to operate, may thence receive a sufficient Recompence for his pains. The whole business consists in the Operation, and in Judicious labouring: Yet in this most men erre. Nevertheless, by the aforesaid Process, you may always make Copper of Iron. I so often inculcate this, only to confirm the transmutation of one into another.

Also of Vitriol such is the Nature, as if the Colcothar thereof be calcined, it with easie liquefaction is turned into Copper. For in it is a wonderful Coppery Nature, and in Copper also a Nature of greatest Affinity to Vitriol. If Copper be dissolved in *Aquafortis*, and Crystallized, it makes every Copper Vitriol, and it is no more Copper: So also of Vitriol, Copper is made; and that is no more Vitriol. Therefore the Reason of such Affinity in Vitriol and Copper is very strange. What is Cuprous or of Copper, makes good Vitriol. So Verdigrease, which is good and highly gradated, gives a Saphyrick Vitriol.

Although it may seem ridiculous for us to discourse of these things; yet it cannot be deny'd, that in Vitriol a Tincture is latent, which is of greater efficacy than many can believe. Blessed is he that understands this. But touching the Oil of Vitriol, further note. If the Oil of Quick-silver, and this Oil be conjoined, and so coagulated in their Process, a Saphire of wonderful Nature and Condition is produced: Not indeed a Saphire stone, but like unto it, of an admirable Tincture; of this I will say no more. Hence it is evident, that stupendious, and to be admir'd *Arcanums* are treasured up in Nature, and in many other things created by GOD, and produced by Nature. Now, it would be more commendable for us to search out these things with an indefatigable labour and study, than to consume our days in Luxury, Drunkenness, Whoredom, *&c.* But at this time, Lascivious Whoremongers, are in greatest Honour, and so are like to be, until with these Vices one third part of Men be suffocated, and another third part destroyed by Pestilence; so as one part of the World, will scarcely remain untainted, or unconsumed. For with this abomination the World cannot long endure, nor good Arts flourish. Therefore, of necessity these evil Courses must be annihilated and cut off, otherwise no good can have place. But when this evil time is expired, the Golden age shall flourish; that is, Man at length shall use his own Understanding, and live as a Man, not as a Brute, nor act as a Swine, or lie in the Caves of Murtherers or Robbers.

Therefore, since I have communicated to you these things of Vitriol, out of my good affection to all; I do earnestly entreat all Physicians in general, when they shall see the unhappy and miserable sick so afflicted with that most grievous Disease the Falling-Evil, seriously to consider, what GOD the Creator, their own Consciences, and Charity to their Neighbour, command and require of them in such a deplorable State as this; and not contemn, or slightly esteem of the Virtues, which by GOD himself are insited in Vitriol. Let Charity move you night and day to be diligent in these things: Let none be found idle, but every

every one make it his busineſs to help his needy Neighbour: But be not you deterred herefrom, becauſe Lawyers do not this. Hear what Chriſt ſaid: *Woe to you Lawyers.* Surely this is not a light Saying. Nor take you any offence at *Theologians*, becauſe they rather ſeek Rewards and Salaries, than take care for the ſick: Theſe are they, which in *Jericho* paſſed by. Be ye *Samaritans*, and preſs after the *Samaritan* Virtue: So GOD will conferr on you ſuch profound and neceſſary Gifts, as in curing the ſick you ſhall be ſenſible of no Deficiency. All things you have need of ſhall be given you, do you only ſearch out this Treaſure.

Thus far *Paracelſus*.

An Admonition.

ALthough all things we have in the foregoing Diſcourſe propoſed, touching our *Sal Mirabile*, be conſentaneous to Verity; and the Virtues, which we have aſcribed to it in Medicine, Alchymy, and various Arts, do powerfully diſcover themſelves, yet we find very much diverſity in it, according to the diverſity of matter, of which it is made. For, that which is prepared of Vitriol, is of a far other Nature, and endowed with far other Properties, than that, which is made of *Salt-Nitre*. And what is made of common Salt, agrees with neither of theſe: For one poſſeſſeth a greater ſharpneſs than another; yea, this more than that, diſſolves Metals. The more potent, are fit for Tranſmutation and Solution of Metals; the more weak ſubſervient to Medicine; the weakeſt, and moſt ſweet, profitable for multiplication and propagation of Vegetables.

Theſe things, he who would reap the deſired Fruits of his Labours, ought neceſſarily to know, and conſider accurately of. For if any one, in hopes of future Multiplication, committed to the Earth the Seeds of Vegetables imbibed with the ſtronger Salt, he will indeed never obtain his deſired end, nor will the Earth give forth any Plants, becauſe ſuch ſharp Salts do rather deſtroy, than augment Vegetables. In like manner, Metals are delighted with a convenient Salt, *viz.* with the more ſharp, as Vegetables are with the more ſweet. Therefore, when we find our labour to be fruſtrated, we muſt not impute that to the *Sal Mirabile*, but to our own Unskilfulneſs.

Indeed theſe Salts are endowed with far more noble Virtues than we mentioned in the precedent Diſcourſe; but the high Ingratitude of Men of this Age, permit us not to diſcover the ſame. For if you communicate your Secrets to thoſe Men, from whom you cannot require a promiſe of Secrecy; be aſſured, the knowledge of thoſe Secrets will preſently come to others, who will proudly uſe the ſame to thy Diſparagement.

If you do the contrary, and keep to your ſelf, whatſoever you have purchaſed by your own Labour and Coſts; you will create Enmities to your ſelf: So as which way ſoever you take, you will ſuſtain loſs.

The Conſideration of theſe things, have cauſed me to reſolve to expoſe my Laboratory, with all my Arcanums, to the view of others. The end of this only was to exhibit to the ſight of all, the truth of thoſe things, which I have purchaſed with indefatigable Labour, and communicated to the World by writing; that this way, the Mouths of the Malevolent and Ignorant may be ſtopped.

I could, if it were needful, give various other Reaſons, by which I was moved to make my Laboratory common to thoſe that deſired it.

Now the year is paſt, in which I promiſed *in my fourth part of the Proſperity of* Germany, I would build a Laboratory, and exhibit the Wonders of GOD to my Friends. I then publickly and privately demonſtrated various moſt excellent Inventions, not without labour and very great Charges, all which I value not, ſince I know, that by this means I have diſcovered the Truth to many, which they alſo will publickly own to the honour of the moſt high GOD, and Correction of envious Detracters.

I did purpoſe alſo, in the following year, to continue my Labours for the ſake of faithful Friends, but (beſides other hinderances) my Age prevented that, Nevertheleſs, thoſe, to whom I have committed my Laboratory, will perform the ſame, and exhibit a Light to this blind World. This I was willing to ſignifie to all, that they may for the future ceaſe to trouble me with Letters.

But whilſt I exhibit the Virtues of my *Sal Mirable*, and to it (prepared in Glaſſes after the above recited manner) aſcribe the virtue of changing imperfect Metals into Silver and Gold, I would not have this matter ſo underſtood, asif we could by the help of it acquire to our ſelves Gold in a very great quantity, it is ſufficient to have demonſtrated the poſſibility (of Tranſmutation) and the ſame to be proved by a ſmall quantity.

It is moſt certain, that very many Medicaments may be prepared, by the help of it, againſt various effects of the Humane Body. Alſo it is moſt certain, that it is very conducent for a particular gradation of the Minor Metals into better. Believe me, that have experienced the ſame; if you rightly proceed, you will reap no mean Fruits.

But touching the true Univerſal, I do queſtion whether by the help of it, it may be procured. Aſſuredly, if common Gold, as to its degree, can be changed above what is Natural, Why ſhould it be judged impoſſible, to exalt it further, in length of

time? My decrepid Age forbids me to put my hand to this Work; yet to Posterity (better able than I to sustain the heat of fire) occasion is given, by Prayers and Labour to search further; perhaps, GOD will grant to them, what he hath denied to us.

This Operation, by which we peculiarly draw profit from the Minor Metals, cannot be performed in common Crucibles, as we before said; because they are obnoxious to breaking, and so the Liquors are easily lost; but in such as will not easily break, unless after a long time, and will not permit the humid Salt to run out. Here it will be needful to peruse those things (relating to this matter) which I mentioned in the Third and Fourth Parts of the *Prosperity of* Germany.

To prepare these Crucibles is a great Work, greater to make some Pounds of Salt, or rightly to use the same; but greatest of all, (and in which the summ of all consists) to know what Metals are to be joined, or in what quantity. Here many will have enough to do, and be at a loss, although they enjoy my Secret Furnace, and know how to make the Salt of Art in abundance.

Besides all these, we must needs crack the hard Nut, if we will eat the sweet Kernel. It is required of us to know an easie way of separating Gold or Silver from fixed Metals; for such a Metallick Mass, altogether untameable, cannot be separated by the help of Lead, *per se*, as Ductile Metals; but here is need of another Separation; which is the principal thing.

Nor should any Man perswade himself, that all things are here so clearly written by us, as he can by their literal sence most easily institute the Operation. For there is need of a long time, and a skilful Master. It would be a very inconsiderate thing to set about those things, of which we have no knowledge.

Although this is my Admonition, here often repeated, yet there will be some, who neglecting it, will set about the said Operation, and perhaps find out various profitable things: In like manner, there will be various found, who following my Prescripts, will reap much benefit from the Minor Metals.

Who can deny, but that *Mary Ranta*, a *Brittain*, hath Propheſied truly, *viz.* That true Alchymy should flourish in the Year of Christ, 1660? I my self have not seen this Prediction, but have it from the Relation of others, whereunto I refer the Reader. And add, that if such a Prediction were not, daily Experience doth abundantly witness, that egregious things are here and there performed in Metallicks, by help of my *Sal-Mirabile*. And there is no doubt, but that all Darkness will daily more and more be dissipated by the power of this Light.

I have unto some communicated the use of this Light for their proper benefit; but these, contrary to my Intention, have caused what I thought to have kept secret, to be spread abroad in publick and many have hit on the right way leading to Verity. If this be done without my knowledge, what would not have been done, if my Laboratory had been open for a year longer? Certainly the World would have shewed it self other than it is, and altogether new; which the new and great Star extending it self from the South to the West, seems to indicate.

Let the most high GOD grant what are necessary, and salutary for us, turn the Ungodly into the right way, and give to his own Children, Rest and Peace, that his most Holy Name and Truth always to be magnified, may not be totally suppressed by the Impious. *Amen.*

ANNOTA

ANNOTATIONS
UPON THE
CONTINUATION
OF
Miraculum Mundi.

Explaining and Defending the *SECRETS* therein contained; As also the True *Aurum Potabile* therein mentioned.

IT is truly said, that He who builds an House by the Highway exposeth his Building to the judgments of all sorts of men, and to their censure especially who have not skill enough in Architecture, to erect a Country Cottage. The same is wont to happen to those who write concerning things not common or unknown. For you shall presently hear People saying, *Who knows whether this be true or not?* thereby signifying that they cannot perceive those things which exceed their Capacity; but nevertheless they will not altogether reject them, because they are yet in doubt concerning the truth of them. This their doubting is not to be taken ill, because it proceedeth from ignorance, but not from envy. On the contrary, there is another sort of perverse men, who being puffed up with their own putatitious knowledge, despise unknown things, not out of simplicity or ignorance, but out of a meer diabolical envy to those who have a greater knowledge and experience of things than themselves.

This hath also happened, and doth daily happen to me, especially since the publishing of my *Miraculum Mundi*, in that I have there disclosed Secrets of great moment, of which the Vulgar, nor yet the bubbles of Envy, have plainly no knowledge; and therefore out of meer Envy, reproach them for Unprofitable and False.

But to stop the mouths of such persons, I intend shortly to build a spacious and well-furnished Laboratory, and in it to place a good Laborious Operator, who being occupied therein with continual Labours, shall shew the Divine Wonders to those who desire to see the same. Which being done, I shall have no farther need to defend my Writings against every Calumniator; seeing that I know there will be those (GOD willing) hereafter, who will defend the truth which they have seen with their eyes and handled with their hands.

In this Laboratory shall be seen not only those Artificial destilling Furnaces, and my Press for Wood, with the circulatory Instruments necessary for the easie making of Salt-Petre; but also those things shall be shewed, which I have treated of in my *Miraculum Mundi*, and its Continuation, yea, and much more than I have there declared.

Those things also which I have ascribed to my *Aurum Potabile* shall be demonstrated to be the very truth, *viz.* That crude Mercury, in an hour or two's time, may be by it converted into pure Gold. Nor shall this only be proved, but also that after my *Aurum Potabile* hath tinged and changed the ☿ into pure and constant Gold, that nevertheless it hath yet great Virtue, *viz.* that any Arsenick, whether white or yellow, being digested in it for some hours, is so changed, that its poisonous quality passeth into a good Medicine, resisting all Poison. Nor doth it only become a powerful Medicine against venomous and incurable diseases, which cannot be eradicated by purging, bleeding, sweating, and the like Remedies, whilst it Tincture the evil Humours in the Blood and other parts of the Body, and changeth them into good Humours. But this also being changed into Medicine, and its Venom converted, sheweth its power in Metals; if it be cast upon melted Copper, then the Copper poured out and proved on a Cupel with Saturn, leaveth behind it some good Silver and Gold. These two proofs are sufficient for the defence of my *Aurum Potabile*. But that any one may be yet rendered more certain, after those two Experiments, *viz.* the coagulation and transmutation of Mercury into pure Gold, and the conversion of poisonous Arsenick into a safe Medicament, he may yet try a third, and that indeed incredible, with the same *Aurum Potabile* that hath been twice used, as before, and this not upon mild or slight Poisons, but upon the most dangerous and indefensible both to Men, Beasts, and all living things, to wit, Mercury sublimate,

mate, which being digeſted for ſome hours in the ſaid *Aurum Potabile*, layeth aſide all its horrid and formidable Venom, and paſſeth into a ſafe Purging and Diaphoretick Medicine, and loſing its former white Colour and corroſive Venom, it becomes a ſweet red Powder, purging out the *Gout*, *Pox*, *Leproſie*, and other deteſtable diſeaſes, and impregnateth Saturn in ſome meaſure with a Golden Tincture. So alſo white Arſenick, after digeſtion, putteth off its white colour, loſeth its corroſive faculty, and is changed into a ſweet and yellow powder.

Theſe Experiments and Proofs ought not to be hidden to the Studious of good Medicines, but to be made manifeſt to the everlaſting and immortal teſtimony of the Truth, againſt all ignorant Sophiſters whatſoever.

I have, for my defence, the moſt ſharp Sword of Truth, whoſe edge, if any deſire to feel, let him come forth; the defence of the Truth will be grateful and eaſie to me, although the malice of the whole world ſhould oppoſe me. I here challenge all thoſe Calumniatorswho being moved by a diabolical envy, have endeavoured to oppoſe my moſt true Writings; let them come forth with their Lyes into the open light, and into the view of the whole World, and ſhew any Experiment like to thoſe which I here promiſe to ſhew, that we may ſee how filthily or baſely they will appear, like the darkneſs vaniſhing by the light and ſplendour of the Sun. If they cannot, as indeed it is not in their power, (*for he that hath any knowledge of things never contemneth a good one*) nor will be poſſible for them to do; foraſmuch as they know nothing, it is but reaſonable that for the time to come they ſhould reſtrain their virulent tongues, and ceaſe to calumniate thoſe things which they neither know nor underſtand.

I do not wonder that thoſe Slanderers, attempting the coagulation of Mercury into Gold, have erred, ſeeing that it hath ſometimes happened to my ſelf, that I have erred two or three times together, and could not effect that Tranſmutation, until the cauſe thereof was known to me: For if through too much haſte the humidity of the *Aurum Potabile* ſhall exhale or evaporate too faſt, the Mercury being dried up, cannot be ſufficiently penetrated, nor throughly tinged.

An errour alſo may be committed, if the glaſs containing the Mercury and the *Aurum Potabile* grow hot too faſt, ſo that the Mercury with the *Aurum Potabile* boil, and leaps, diſperſeth it ſelf by too much motion, and exhibiteth it ſelf in form of a powder, when it ought to remain in the bottom, concreted into a round maſs. So will he alſo greatly erre, who ſhall uſe Mercury that is not pure and clean, but adulterated, and defiled with many ſordes or impurities, which Impediments deny ingreſs to the Tincture, and render the trial uncertain and precarious. Therefore it is neceſſary that the Mercury be firſt well ground with Salt and Vinegar, in a *lignum vitæ*, or Stone or Glaſs Mortar, and by a diligent waſhing freed from all its blackneſs, whereby it more eaſily admitteth the Tincture. I have found that Mercury very fit for this Operation, which is ſublimed by the *Fulmen of Jove*, into which my *Aurum Potabile* hath a ſwift Ingreſs, and tingeth the whole of it.

Truly it ſhews the great ignorance and boldneſs of thoſe Calumniators, to dare to ſpread ſuch falſe clamours and rumours, ſaying, *That Mercury cannot be indeed tinged into Gold by my* Aurum Potabile, *but that the Gold which was before in my* Aurum Potabile *applieth it ſelf to the Mercury, and in ſome ſort coagulateth it, but doth not render it fixt and conſtant.* But this is indeed a very rude and ignorant Aſſertion, which every one but meanly verſed in the handling of Gold and Mercury, is able to detect of Folly.

For if common Gold, diſſolved in Water, would readily coagulate Mercury, what ſhould we further ſeek or deſire? But this is greatly wide of the matter, ſeeing that in all ſuch Solutions the Gold in digeſtion adheres to the injected Mercury by precipitation, and paſſeth with it into a white *Amalgama*, the Mercury conſtantly perſevering in its priſtine Nature, not admitting the leaſt tranſmutation into Gold, the which exceedeth not the knowledge and capacity of Ruſticks, but is difficult to be underſtood by thoſe putatitious Doctors, who believe ſuch things to exceed all Belief.

It is well known, that the pureſt Gold hath no more of perfection than what it needeth for its own defence; that hath not the leaſt power to amend any other metal, and to render it fixt and conſtant, much leſs that it can coagulate Mercury, (the derider of all Alchymiſts and Sophiſters) into Gold. Of both is made a white *Amalgama*, but not hard yellow Gold conſtant in the Fire. He that believeth not me, let him make trial himſelf, and he ſhall find it anſwerable to my words. Beſides, all corporeal Gold refuſeth ſolution by fixt Nitre, of which my *Aurum Potabile* is prepared, the which, if it were yet poſſible, the Gold would not be hid in it, but the ſolution would be yellow, and would colour the skin with a ſubrubid or blackiſh colour, which my *Aurum Potabile* doth not. Therefore its tinging Virtue conſiſteth not in corporeal Gold, but in a golden Tincture, from the firſt *Ens* of Gold, converted into an Aſtral Eſſence, by the benefit of Art. By a like reaſon the *Aſtrum* of *Luna* impreſſeth Mercury with the nature of Silver, the *Aſtrum* of *Venus* tranſmuteth it into Copper, the *Aſtrum* of *Mars* converteth the ſame into hard Iron, the *Aſtrum* of *Jupiter* of it maketh Tin, and the *Aſtrum* of Saturn inveſteth it with the nature of Lead. For Mercury is tranſmuted into that Metal, whoſe *Aſtrum* it ſhall receive. So the *Aſtrum* of Mercury changeth all the metals into a running *Argent-vive*, although this tranſmutation brings little or no profit. Nevertheleſs, I intend to prepare the *Aſtrums* of all the metals, and thereby to ſhew the power of Nature and Art to the ſtudious of the Truth, and ſo to manifeſt it to the World. The *Aſtrums* of metals being extracted from their firſt *Ens*, they are no longer metals, but their tinging Anima's, which at length with Mercury, become corporeal metals.

This is the true and genuine Foundation, upon which the whole ſtructure of my *Aurum Potabile* is built. Therefore, as pure Gold, cannot render Mercury partaker of its own golden nature; ſo neither Silver, nor Copper, nor any other metal, will communicate its nature to Mercury, but being precipitated, attracteth it to it ſelf, but in no wiſe changeth it. Hence the Philoſophers ſay, That the Tinctures of Metals are not to be ſought in the metals themſelves, but in their firſt *Ens*. As *Baſil Valentine*;

Quod prima Entia non efficiunt,
Hoc Aurum & Argentum non faciunt.

Which is to be well regarded by him who deſires to attain his wiſhes.

From

From all these things it appears, that my *Aurum Potabile* being made of the first *Ens* of Gold, by Art, into an Astral Tincture, ought to be an excellent Medicine; as also, that it is such, I have largely demonstrated: For if it were not better than a common Solution of Gold, it would not change Mercury into true Gold, neither also would it have the power of transmuting a most potent Poison into an excellent Medicine. Without doubt, such Medicaments, which by the help of my *Aurum Potabile*, from most violent Poisons, are changed into so salubrious a nature, as Antidotes, do powerfully resist other Poisons and pertinacious Diseases, and may be used in Physick with great admiration. What would it profit, if the Body should be purged by an hundred stools, and at the same time the Disease doth not consist in the matter of stools, but still keeps its place, and gives no way, except it be attacked in its own quarters? Neither will it avail any thing to let all the blood out of the body, if the seat of the Disease be not in the blood. Yea, if it were there fixed, and the whole mass of blood wholly corrupted, it would be in vain to undertake to amend the same by bleeding; for all the blood cannot be drawn out, without peril of Life. And if, for example sake, two or three pounds of twenty should be left in the body, to be amended by sanguifying Meats and Drinks, and good Blood to be encreased, yet the event would not be answerable, because the encreasing blood would be corrupted by the former. E. g. An Hogshead of sharp Vinegar, out of which, if you should draw all the Vinegar, leaving only the fæces or Lees, and should by degrees pour into it noble and generous Wine, the Wine would be plainly corrupted by those few fæces. Even so it is with those fixed Diseases, which have taken such deep root in the humane body, that they cannot be taken away neither by Purging, Bleeding, nor Sweating, nor by outward Anointings. Therefore they are to be tinged and amended in those places, to which they pertinaciously adhere, by the help of Tinctures or Astral Medicines, as above is done with Mercury, and Mercury sublimate, that remaining there, they may put on a better nature and quality, and no farther molest the humane body. And this is the true and genuine way of Curing radicated and incurable Diseases. Yet I would not be so understood, as if I condemned all Purgation; for Purging being used at a due time, brings no small profit. Blood-letting also being seasonably used, wants not its utility; but being often abused, is the cause of great mischiefs, and not seldom hastens on untimely death.

Moreover, the following Experiment, for the trying the Truth of my *Aurum Potabile*, is not to be contemned. Rub some *Argent-vive* upon a small Silver Plate, and what is superfluous, and doth not adhere, wipe off with a Linen cloth, after the manner of Goldsmiths, (or Gilders) who gild with the *Amalgama* of Gold and Quick-silver: Digest the Silver Plate in my *Aurum Potabile*, for half an hour, or an hour, then take it out, and you shall see with how fair a Golden Colour it will be gilt. For in this digestion the Mercury is not so heated, that it can vanish in smoak, and therefore adhereth to the Silver Plate, and is tinged by my *Aurum Potabile* into the best Gold. Now try the same operation with another Silver Plate, rubbed over with *Argent-vive*, and digest it in a solution containing corporeal Gold, to see if that Plate will be gilt like the other. For the Plate coming out white, you will see a very great difference.

I could here add more such Experiments, if I thought it needful. If Goldsmiths (or Gilders) could gild their Silver Vessels, by such a coction (or digestion) in a solution of corporeal Gold, without doubt they would soon leave the common way of gilding by the *Amalgama* of Mercury and Gold, because by its poisonous Mercurial fume, affecting the bodies of those who handle it, it is wont to cast them into dangerous and lasting Diseases. But because they can effect nothing by such golden solutions, they are forced to supersede their Use, and to acquiesce in the old usual way.

These few things of my *Aurum Potabile*, which is the Fourth and Last Article in my *Continuation of Miraculum Mundi*, I am constrained to publish for its defence, that every one may know I have not attributed too much to it, but that it can perform much more; the truth of which I am ready to exhibit. Therefore this is a Medicament most worthy to be presented to Great and Noble Men, as a precious Gift.

As for the Third Process in the same Work, which is offered to Physicians and Citizens, that they may by an easie labour obtain good Medicines for Mankind, and an honest livelihood; it is openly and clearly described, so that in it not the least thing is hidden or concealed, I cannot force any to believe or try the matter; I have enough to do with my own affairs; but if in my Youth I could have obtained such a Manuduction, as I have hitherto and still do administer to others, I should not have been forced to the searching out of Nature with so great charge and labours, heavy stinks, and great danger of my Life, as I have. I here again assert that which I have often asserted, *viz.* That by the fulminating of Salt-Petre with Tin and Mercury, much Gold and Silver is acquired; which thing I have often done, and as yet can do it, and do promise that in due time I will demonstrate it publickly in my Laboratory to Friends. The other point, in which I have taught how Rich men may augment or improve their Gold and Silver, much safer than they are wont to do by putting it to Usury, I have truly and candidly revealed, and have kept back nothing. NB. But that there are other waies of acquiring Riches, without great Cost and Labours at the Fire, the troublesome Exercise of Merchandise, or other things, disturbing or hurting the mind, I do in no wise deny. For the like things are every where obvious, in divers place of my Writings, especially in the 2, 3, and 4 parts of *The Prosperity of Germany*, where mention is made of an Excellent Work, by means of which an honest livelihood may be obtained in tranquility, without noise, meltings, and blowings of Bellows, and that by the help of a certain Water extracting Gold and Silver from Sand, Earth, Clay, Stones, and Minerals, without great labour and costs. And although there should not be at hand any such Earth, Sand, or Stones, which contain Gold and Silver, from which these cannot be elicited by common melting; (yet there is hardly any place in the World, where these matters do not occurr) nevertheless there is no want of Lead and Tin, from which two at all times, and in all places of the World, Gold and Silver, by the help of the said Water of Salt-petre may be extracted; which is an excellent and profitable Art, the which, lest it should die with me, I have already shewed it to some Friends.

I alſo here promiſe, that in my publick Laboratory I will ſhew and demonſtrate various Secrets. But let no man perſwade himſelf that I will do this to all men, without deſcrimination, or admit every unknown Perſon to this demonſtration, but only thoſe whoſe Piety and Candour I my ſelf have long known, or ſuch as ſhall be recommended by them, or other known Friends.

Moreover, beſides my publick Laboratory, I will alſo have a private one, in which ſhall be ſhewed to my Friends the more curious and excellent things which I have mentioned in my Writings.

There ſhall be ſhewed rare and hitherto unknown Wonders of Nature, as Vegetable and Mineral Plants. As for example.

Vegetables of a Metallick Nature; of which we have ſpoken in the Treatiſe of *The Nature of Salts*.

Herbs ſpringing up or growing out of hard Flints, yea, out of pieces of Iron.

Metals in a few hours growing up like Vegetables, by the help of a certain Water; concerning which, ſee my Deſcription of the Liquor of Flints, in *The Second Part of Furnaces*.

Metals in a few hours ſpace, like Herbs, without the addition of any foreign matter, growing up, ſo that they loſe nothing in the trial of the Cupel.

Alſo divers manual Operations, and Compendiums not common in the Deſtillation of excellent Spirits, profitable both in Alchymy and Phyſick, ſuch are Spirit of Nitre, Spirit of Salt, *Aqua-fortis*, *Aqua-regis*, and the like, by which they are ſo eaſily and ſwiftly deſtilled, that with two or three pound of Coals, by a Body and Head, in Sand, every hour may be deſtilled one pound of ſpirit, and that ſo pure, ſweet, and clear, that it needs no rectification.

But ſeeing that this is a thing unheard of, and therefore will be look'd upon by the common Chymiſts as a thing incredible, I cannot forbear here only to point at the way, by which it may appear poſſible to be done.

Suppoſe that I have need of ſome pounds of ſpirit of ſalt, and want the opportunity of preparing it in a long time, by the force of fire, I uſe the following preparation. Inſtead of a great and continual fire, I uſe a ſeparatory Art, ſevering the pure from the impure, diſſolving common Kitchin-ſalt, or ſalt-petre, in common Water, and adding to the ſolution put into a Cucurbit a ſeparatory ſulphur. The Cucurbit, with a Head or Retort, (by which alſo the Deſtillation may be made) being ſet in ſand, I kindle a fire, by which the water containing the ſalt may boil, and ſo by the ſulphur, in the boiling, the pure parts are ſeparated from the impure; the purer parts are rendered very fugacious and ſweet clear ſpirits; the groſſer, more earthy and fixed ſalt remaineth in the Cucurbit or Retort, of a very wonderful Nature and Property. And after this manner, from one pound of ſalt or ſalt-petre, may eaſily be deſtilled one pound of ſpirit of ſalt, or ſpirit of Nitre. From a pretty large Cucurbit, in ten hours, may be made ten pounds of ſpirit of ſalt, or ſpirit of Nitre, which two ſpirits being mixed together, make an *Aqua-regia*. The quantity of your ſpirit in each Deſtillation will be greater or leſſer, according as your Cucurbit is larger or ſmaller. He that deſireth to make *Aqua-regia* by the ſame deſtillation, muſt diſſolve equal parts of ſalt and ſalt-petre in Water, and deſtil by a Body or Retort.

This is indeed an excellent Compendium for all thoſe that need a great quantity of thoſe Spirits. Gold, Silver, as alſo all the other Metals, may be diſſolved without *Aqua-fortis*, or *Aqua-regis*, and the like ſpirits, by the help of certain ſalts diſſolved in water, which truly is alſo a famous Invention. So alſo it is with thoſe other rare Experiments above mentioned; as for example, If a metal ought to grow in height, ſomething contrary is to be added to it; for this, while it flieth from its contrary, ariſing out of the maſs, groweth up as well in the dry as the moiſt way.

If we would have an hard Metal or Flint bring forth an Herb; the Metal, whether it be gold, ſilver, copper, iron, tin, or lead, are firſt to be reduced into a tender Powder by ſalts, and that Powder being put into an Earthen Veſſel, is to be moiſtened with a certain peculiar Water, and the ſeeds of the Herbs to be ſowed or ſet therein, which after they are grown to perfection, are to be no longer moiſtened, but the powder is to be expoſed to the Rays of the Sun, which again becoming a metal or an hard ſtone, plainly like to another metal or ſtone, containeth the inhering Roots of the Herb, and cauſeth the Ignorant to admire how an Herb ſhould grow out of a piece of Gold, Silver, Iron, Copper, or an hard Flint. This is alſo certain, and not to be doubted, that the ſaid Herbs ſo growing out of the Metals, do obtain the nature and properties of thoſe out of which they ariſe.

Although theſe Experiments of Herbs thus growing afford no profit, yet they are noble Operations of Nature and Art, having more in them than they promiſe at the firſt ſight, therefore I have not here brought them in vain, inaſmuch as they are of no ſmall moment.

But that I may here (at leaſt) mention ſomewhat of this growing faculty of Vegetables and Metals, be it known to every one, that in my publick Laboratory ſhall be ſeen the ſeeds of all ſorts of Herbs, and eſpecially of Grain, as Wheat, Barly, Oats, and others, *viz.* by what means they may be ſo prepared, as to acquire a ſwift faculty of growing, and that one grain may produce ten, twenty, or thirty ſtrong ſtalks, with full ears, and fruit an hundred fold.

In like manner ſhall be ſhewed to ſome Friends, how Salt-Petre, as the only promoter and helper of the growing faculty, may be ſowed it ſelf, ſo that it ſhall recompence the labour an hundred fold; for ſalt-petre multiplieth it ſelf, and groweth up out of common ſalt, like other Vegetables; whence that old Proverb of ſowing of ſalt might perhaps take its Original.

It behoveth that I here make mention of yet another wonderful thing concerning the growing faculty, to be ſhewn (God willing) in my private Laboratory. And it is this, that Gold and Silver do grow, are encreaſed and multiplied out of groſs Saturn, even as the ſeeds of Vegetables, out of a dunged and ſalt Earth, ſo that in fifty ounces there is daily an augmentation of one ounce, if not of two. He that ſhall be here a good Husbandman, and skilful in ploughing of Saturn, and rendering him fertile, and of ſowing or planting in him a fit ſeed, he will have a plentiful Harveſt, anſwerable to the ſeed which he ſowed, and will eaſily gain three or four times as much.

There-

Therefore, becauſe the growing faculty of Vegetables, Animals, and Minerals, or Metals, taketh its riſe from the only and Univerſal Salt of the Earth, and this from the Salt of the Sea, and the Sea Salt, from the Sun, if the Divine Goodneſs ſhall grant me Life, I will ſhew to my Friends, how by ſmall labour and charge, the Univerſal Salt fatneſs, fit for the rendring all barren and ſandy ground fruitful, inſtead of Dung, may be copiouſly ſeparated from Sea Salt. Yea if need require, I can eaſily demonſtrate, that alſo the natural Seed of Gold, the true Univerſal Medicine may be prepared of the ſame, or that it may be acquired from the viſible Ocean which is known to every Man. But ſeeing that belongs not to this place, we referr the Reader, deſirous of ſuch ſubtile knowledge, to the Treatiſe of the Nature of Salts, where he will find thoſe things which will ſatisfie his deſire.

Theſe, and the like Experiments ſhall be ſhewn in my Laboratory, among all which, that is the moſt excellent, by which a Man, without the incommoding of another, and with great quietneſs and Tranquility, may honeſtly get his Food and Raiment. There ſhall be alſo demonſtrated thoſe four *Arcanums* treated of in *the Continuation of* Miraculum Mundi, and many other things treated of in my Writings, which many believe cannot be effected. That ſo I, by giving an occular Demonſtration, may vindicate my Writings from the Injuries and Reproaches of the ignorant, and alſo leave behind me ſomewhat for the good of Poſterity.

A TREATISE OF THE Nature of Salts:

OR, A

Clear Deſcription, declaring by a perfect Explanation, the Nature, Properties, and uſe of ſuch Salts as are commonly known, as alſo of a certain other very wonderful Salt, hitherto unknown to the World; by whoſe help all Vegitables Animals and Minerals, without diminution of their weight, or change of their form, may be tranſmuted into hard and incombuſtible Bodies:

WITH

A moſt firm Demonſtration that Salt (after God and the Sun) is the only Beginning, Original, Propagation and Augmentation of all things; from which the greateſt Treaſure of the whole World; and the greateſt Riches may be obtained.

THE PREFACE.

THe manifold and various ſorts of food, whether prepared of Fleſh or Fiſh, if brought to the Table not ſeaſoned with Salt, are not grateful to the Palat; in as much as they neither exhibit a pleaſant reliſh, nor conduce to the health of the Body. Every man will readily aſſent to the truth of this trite and vulgar Maxim, if he ſhall conſider with an accurate mind, that among all the Seaſonings and Sauces of food, Salt holdeth the chiefeſt place, and that there is no other equal to it, ſo that among ſo many, there is no one to be preferr'd to it.

There-

Therefore what great and excellent Treasures, admirable Virtues, and most worthy Endowments, in which, by diligent search, and inquisition the minds of men may be occupied, are contained therein, I have determined in this present Treatise to enquire into, and declare; inasmuch as for the space of fifteen or sixteen years, I have endeavoured nothing more, than that by all my Labours I might serve the Divine Glory, and the publick good. For by my first endeavours I published a Work, treating of Philosophical Furnaces *in five parts, and I discovered five Furnaces, adapted to the various modes of Distillation; I also shewed the way of preparing (by an artificial manner) excellent Medicines which drive away various and divers Diseases afflicting the Humane Body, which profitable and artificial Inventions, no man before me hath revealed.*

Next follows my Mineral Work, *shewing the Original, and emendation of Metals and Minerals: To which succeedeth my* Pharmacopœia Spagyrica, *in three parts, treating of Vegetables, and by what means efficacious Medicines may be prepared of them.*

Next after these, was my Work of the Admirable Nature and Properties of Salt-petre, *in which is solidly demonstrated, that that Miracle of all sorts, is the true Universal Solvent of Philosophers, which is subservient to the use of all men, high and low, rich and poor. That little Treatise I have called by the name of* Miraculum Mundi, *which I have augmented by an Explication and Continuation, and fenced it with a defence and Apology, against the wicked Insults of Envy and Scorn. In all these I have set before the Eyes of this blind World, the Divine Miracles and Misteries of Nature.*

After this, came out another Treatise, under the Title of the Prosperity of *Germany, in four Books, the two latter of which are not yet Printed, but shall be published in a short time, if God shall prolong my life, which contain very profitable Precepts of the Oeconomy and Administration of things familiar.*

Then another little piece, called, The Consolation of Sailers; *teaching how they may defend and preserve themselves in all long Voyages, as to the* East-Indies *and other parts, against Hunger, Thirst, and other incommodities of that kind, to which they are wont to be Obnoxious.*

Moreover, A Treatise of Tartar, Vinegar, and Spirit of Wine, *shewing their easie attainment and preparation.*

To these I have adjoined, a Treatise of *Aurum Potabile, and another of true* Aurum Potabile, *or the* Universal Medicine, *and other Apologetical Writings, in which I have not only set forth the perfidious unfaithfulness of men, but have also revealed many excellent Sciences, that by all these Writings I might illustrate the Divine Glory, and contribute to the benefit and profit of my Neighbour, by giving him as it were wholsom and excellent food, whereby both his Body and mind may be equally refreshed.*

And although the said Meats be wholsome, of a good Savour, and contain their own Salt; nevertheless, it seems to me necessary, to salt them as it were afresh, and to season them with a certain Sauce, that they may be tasted with so much the greater appetite and pleasure. And I have so much the more a mind to do this, as I more studiously endeavour to observe that precept of the ancient Doctors, that no Meat should be brought to the Table without Salt. For it was a received custom in former time in well ordered Familiss, to set the Salt first upon the Table before any other Dish, and not to take it away till all other Dishes were first removed: The which indicates, that Salt is a most profitable thing, and an highly necessary gift of God, therefore of right claimeth the precedency of other Meats in setting upon the Table, and of remaining there, till they are again removed. But that this most Noble and Divine Gift, may the better be understood by the ignorant, and may be made more known than hitherto it hath been, I cannot pass by, but I must indulge my self, as my time will allow, in a few words, and as it were by the bye, to shadow out, and depict its great and admirable efficacy, for the profit of Mankind. But here I shall speak but of few things, and that very compendiously, the studious of Divine Wonders may find the rest in the Writings of other pious and diligent Men, if he hath a desire to know more.

As for the Original of Salt, which is drawn out of the Ocean, as an Universal Storehouse, Writers are divided into divers parts and Opinions. Some think that those Salt Fountains, which in many, and various places of the Earth break forth from their Springs, and by the help of boiling, yield their Salt, do not take their beginning from the Ocean, but from a Salt peculiarly generated, and brought forth in many places of the Terrene Globe, like Metals. And they establish their Opinion by this Argument; That the Water of those Fountains much exceedeth, oftentimes, that of the Sea in saltness; and on the contrary, the Sea Water being brought by long and tedious Passages through the Earth, necessarily looseth its saltness, and therefore leaving its Salt, it ought to come forth plainly sweet, or insipid. This reason, at the first sight, seemeth so agreeable to truth, that one can hardly think the matter to be otherwise. But most Springs of sweet Water, in their first rise were Salt, which penetrating the passages of the Earth, have deposited their Salt in the same, to nourish the Earth, and that they might come forth sweet for the daily use of Man. Whence they have given rise to so many, and such various Rivers, which again return in that Universal Store-house the Sea, or Ocean, by which incessant and Reciprocal Flux, they are impregnated with Salt, and Communicate the same to the Earth, that it may never labour under a want of due nourishment, but may render Minerals, Stones, Trees, Grass, Beasts, and even Men also, partakers of the same perpetually, and so may serve as well for the Sustentation, Propagation, and Conservation of Irrational, as Rational Animals, the which no man of a sound mind can deny, except he will also deny the Circulation of the Blood in the Body of Man, or Microcosm, *which is plainly unknown to not a few, and will say, that the blood in the little Toe, or little Finger, or left Ear, or other places, doth not arise from the Liver, the Universal Fountain of Blood, but that it is particularly generated and produced by the Vital Spirit, in those very parts, which savoureth not a little of Absurdity.*

Seeing therefore, that the constant Circulation of the Blood in the Microcosm, *can be in no wise deny'd, why should not also such a Circulation in the* Macrocosm *be admitted as true? For as the Blood of the Human Body arising from the Liver, diffuseth it self through all the Passages and Veins of the Body, as well small as great, and Conserveth the life of the whole, nourisheth all the parts, and augmenteth the good juices, which are changed into Flesh, Bones, Skin, and Hairs in the Members themselves, and leaving the unprofitable Phlegm to be expelled by the Pores of the skin: So also is it with the Nutriment and Universal Aliment of the great World, while the Salt water without intermission, of the great Sea, or Ocean, encompassing the whole Globe of the Earth, by many small and great passages or Veins, passeth through all the parts of the Earth, and nourisheth and sustaineth them with its Salt, that Minerals, Metals, Stones, Sand,*

Sand, Clay, Shrubs, Trees, and Graſs may be nouriſhed and grow, and in growing take their encreaſe. The reſt of the Water being freed from all ſaltneſs, is exterminated as a ſuperfluity in the Superficies, and being diffuſed into various Springs, as well ſmall as great, is expelled, no otherwiſe than the ſuperfluous ſweat of the Blood in the Microcoſm, *by innumerable paſſages and pores. But that in many places of the Earth, the Water doth not leave its ſalt, but carrieth it along with it ſelf, that may very well come to paſs for divers reaſons. For firſt, the moſt excellent Governour, by His Divine Providence, hath moſt wiſely ordained and appointed, that a ſalt water of this kind, which men could in no wiſe be without, ſhould break forth out of the Earth, and it is thus effected: The Sea-water every where paſſing through the paſſages and clefts of the Earth, in ſome places is dried up by the Central fire, and coagulated into hard and great pieces, which being digged up by men, and diſſolved by the help of Water, and freed from its faces, is boiled up in fit Veſſels, and reduced into a pure* Salt.

But if it happeneth that other Water paſſing through thoſe paſſages, findeth pieces of Salt of this kind, it diſſolveth ſo much of the ſame as it can carry along with it, and afterwards is boiled into Salt after various manners, according to the greater or leſſer quantity of Salt it hath carried along with it.

But that one Salt Fountain is richer in Salt than another, the cauſe of the difference is in the Water, which paſſing by, doth more or leſs aſſociate it ſelf with the Salt, and ſo is made ſtronger or weaker.

Theſe few things are ſufficient for the refelling of their Opinion, who aſſert, that Saline Fountains do not draw their original from the Sea, but are generated and produced in a peculiar manner in the Earth, by the help of the Stars.

But if this ſhould ſeem credible, nevertheleſs it would ſeem more credible, that the Sun and Stars caſting their Rays and Influences into the Ocean or Seas, ſhould there generate Salt, which afterwards penetrating through the pervious paſſages of the Earth, ſhould convey due nouriſhment to the ſame.

This reaſon may alſo be aſſigned of the greater or leſſer quantity of Salt in Fountains or Salt-ſprings, that thoſe paſſages which receive ſalt water from the Sea, differ in ſcituation of place, and are alſo differently diſpoſed or allotted by the ſea-water it ſelf, which being various and manifold (in reſpect of ſaltneſs) differs much in one place from another.

For by how much the nearer the Sea-water is to the North, *it contains ſo much the leſs ſalt, ſo that oftentimes it ſcarcely holds the tenth or twelfth part of Salt. But the nearer it is to the* South *or the* Eaſt, *it is inriched with ſo much the more ſalt. For this reaſon, in many places of the* Eaſt *and* Weſt Indies, *the ſea aboundeth and ſwelleth with ſo great a force of ſalt, that when it is ſtirred up by the vehement impetuoſity of Tempeſts, it caſts out with its ſurges a copious ſpume or frothy ſcum upon the ſhore, which being afterwards dried by the Rays of the Sun, the Inhabitants are wont to uſe for the ſalting of Fleſh and Fiſh. Experience teacheth, that in places of this ſort, four pounds of Sea-water yield one pound of ſalt, and the fertility of thoſe Lands alſo indicates the great quantity of ſalt, which without any cultivation or human labour, both Winter and Summer inrich the Inhabitants with moſt excellent Fruits. But thoſe Regions ſcituated near the Arctick Pole, or North, do not enjoy ſo great a fertility, becauſe they want the greater and more penetrating Beams of the Sun, and do not exhibit ſo great a quantity of Salt, which is the cauſe of all fertility, and therefore thoſe Regions are denied ſo large and ſpontaneous a fruitfulneſs.*

But that Salt which the Unskilful have been accuſtomed to have in little or no regard, may be had in greater honour, I neither could or would any longer paſs by its due Name in ſilence, and therefore I have called it the greateſt Treaſure, and moſt ample Riches of the World.

Moreover, that I may prove and demonſtrate, that this common abject ſalt, known to every man, (in which the life, conſervation, growth, and propagation of all the Creatures conſiſteth, and which is the beginning and end of all things) doth deſerve this title, and that a greater Treaſure is not found in the Earth; it will be neceſſary to do this, that I make manifeſt the infallible Verity of the Myſteries of GOD and Nature.

But I deſire of the unprejudiced Reader, that he will not be offended at the vileneſs of abject and contemptible ſalt, nor think that I, in giving this Title to it, and calling it the greateſt Treaſure and chiefeſt Riches of the whole World, have exceeded or given it too great honour. For ſo great and honourable a Title doth of right belong to it, and ſhould as yet be inſignized with a greater, if a greater by me could be attributed. And I eaſily perſwade my ſelf, that if thoſe who are captivated by the hunger of Gold, ſhall ſee this Book, and read the Title, they will conceive no other thing in their minds, than the deſcription of the great Univerſal it ſelf, or the revelation of great Riches and maſſy Treaſures, which they will hope to find in this Treatiſe, never dreaming that poor abject and contemptible ſalt ſhould be ſet before them, and therefore will ſay, What is all this noiſe about a handful of Salt? Who could have thought that Glauber *would have dared to have given ſuch a Title to Salt? But I earneſtly require of thee, my Friend, that thou wouldſt patiently read thoſe things which in this Writing I have put before thine eyes, concerning Salt, and that thou wouldſt accurately examine them, that thou maiſt apprehend me to have written the pure and ſincere truth. If they exceed the capacity of thy mind, and thou haſt not hitherto learned or underſtood the ſame from the Books of others, I would have thee to underſtand that all men have not knowledge of all things, and that the Omnipotent GOD hath left many* Sciences *to Poſterity, which he hath hitherto concealed from the proud and haughty. Read over and over the true Writings of the ancient Philoſophers, that thou maiſt know, and throughly know, that thoſe men who have ſearched the moſt intimate Penetrals of Nature, had ſalt in great eſtimation, to have induſtriouſly concealed its Myſteries and* Arcanums *from the ingrateful World, which now in theſe laſt times are brought to light, for thee and all others, to be received as incomparable Gifts, with a grateful mind.*

Therefore Reader bend thine Ears, and open thine Eyes, overgrown with blindneſs and darkneſs, attend to thoſe good things which I ſhall diſcourſe to thee of ſalt; if thou wilt make trial, and will ſearch them throughly by an accurate examination, whether they agree with God, Nature and Truth, I doubt not, but thy mind will be enlightened with a great light, and thou wilt become as a man renovated; but if with a proud mind thou ſhalt refuſe to learn and underſtand thoſe things, or ſcoff or mock at them, thou ſhalt be reckoned amongſt the number of Fools, and perpetually abide in the ſame, although Ariſtotle *himſelf, and all the Profeſſors and Doctors ſhould ſit upon thy long Aſs-ears, and thou with the ſame ſhouldſt endeavour as an Aſs with a ſack to cover thy fooliſh Pride and proud folly. It is much better for a man to know many things, and meaſure or eſtimate himſelf in his own way or manner, than to know nothing, and bear himſelf out with the vain pride of his own ignorance. I have never ſeen any man endowed with true knowledge, who hath preferred himſelf to others; on the contrary, I have found very many, who being ſtirred*

up by envy, hatred, and inhumane malice, do nothing sooner or more readily, than insult and make a mockery at pious men, to whom the Divine Bounty hath granted his Gifts, and as it were, devour them with their Wolf-like Teeth, which diabolical wickedness the Divine Justice in its own time will not suffer to escape unpunished.

Thus much I was willing to say to the proud Caviller; now therefore attend to those things which I shall speak concerning Salt.

A TREATISE OF THE Nature of Salts, &c.

I. *Of the Nature of* SALT.

THat it may be demonstrated in a *Compendium*, how many good things, as first the Tranquility of our mind, the chiefest Temporal Good, the Conservation of our Bodily Health, the great Riches and Treasures, and other things which are necessary for humane use, are latent or hidden in the despicable Body of Salt; in the first place let us hear what our Saviour Christ himself saith, who is the Truth, the Light, and the Life, in the Gospel of St. *Luke*, Chap. 14. Ver. 34. and in *Mark*, Chap. 9. Ver. 50. *Salt* (saith he) *is a good thing*. And in *Luke*, Chap. 18. Ver. 19. *No man* (saith he) *is good, but God alone*. But he calleth his Disciples the Salt of the Earth, and addeth, *If the Earth wanteth salt, it is unprofitable, neither doth it bring forth Fruit*. And Dung it self, without Salt, is of no use. This is as if he should have said, Salt is the most noble thing of the whole World; and yet amongst Fools the most abject and contemptible. Be ye like to this, and do the Will of God, and as Mediators, lead Sinners to GOD, which otherwise cannot be done. *I am your Head, your Master, and go before you; tread ye in my footsteps, follow me, I am the Way*, &c.

But to return to Salt, we will hear the opinion of others concerning it: There is here no need to cite the Writings of Philosophers at length, seeing they are at hand, and from them it may be manifest to every man, that next after GOD, the Sun, and Fire, they have esteemed it the most Noble Creature, and have given to it Honours as it were Divine. The Heathens would not sacrifice to their gods without Fire and Salt. If you read the Old and New Testament, you shall find that God himself hath commanded to have regard to Salt. In the Gospel of St. *Mark* you shall find that all men are to be seasoned or preserved by Fire, and all sacrifices with salt, and that the Lamp or Light upon the Altar was never to be put out, but to be kept in continual Burning. In the Christian Church, this manner is still observed, that no Infant is baptized, without some Light or Candle be present, and the Priest sprinkles a little salt upon the mouth of the Baptized, with these words, *Receive the salt or seasoning of Wisdom*; as if he should say, *Learn to understand and know God, and be not like the Beast, which hath no understanding*. These Ceremonies are observed in some places at this day. The Greek Church baptizeth with fire and water, by that Rite indicating the Holy Ghost to be like to fire, because he warmeth the cold hearts of Men, enliveneth them, and turneth them to GOD. God Himself calleth himself a consuming Fire; and the Holy Ghost hath alwaies appeared in the form of Fire, and shewed Himself to the Disciples of Christ in fiery Tongues. The *Abyssini* professing the Christian Religion in *Africa*, under the most Potent King and Priest *Prester John*, baptize with Fire and Water, and make a sign or mark in the Foreheads of the men which are baptised, by Burning. In short, there is not any man among the Heathens, Jews, Turks, and Christians, who doth not highly value Fire and Salt, of which notwithstanding he knoweth no more than a mad-man, or than a Swine, or an Ox, or other irrational Beasts, which pass their life without understanding. But these two Creatures of God, to wit, Fire and Salt, are one and the same in the foundation of Nature; for Fire produceth Salt, and Salt is again converted into Fire, and Fire into Salt, so that by a mutual conversion they are alwaies changed one into the other. Therefore *Hermes* the Father of Philosophers saith, *That which is above, is as that which is below, and that which is below, as that which is above*; as you may read in his *Smaragdine* Table. The Sun or Fire is above, Salt is below, which is by an easie way rendered combustible, like the sun or fire; as I have taught in many places of my Writings, and all Philosophers, with an unanimous consent, do confess, that the greatest Secret lieth hidden in fire and salt.

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Hence is the word Alchymy from fire and ſalt, which penetrate all things, and Fire is the Symbol of GOD, who hath alwaies exhibited himſelf to mortal eyes, in the form of Fire: But Salt is the Symbol of Eternity, inaſmuch as it defendeth and preſerveth all things from Corruption.

There are ſome who determine the Evangeliſt *John* to have underſtood Hermetick Philoſophy; and there is yet extant an Hymn, compoſed and ſung by the ancient Fathers, in honour of the ſame *John*, in which occurr theſe words: *Who maketh Gold of Rods or Twiggs, and Gemms of Stones.* Nevertheleſs I leave thoſe things to every man's judgment, and here I only ſay this, That both Heavenly and Earthly Myſteries were known to the Prophets and Apoſtles.

But although I have never taken in hand ſo great a Philoſophick Work, nevertheleſs it is ſo known to me from the Writings of the Prophets and Apoſtles, and from the Light of Nature, that by comparing things Divine and Humane, I could eaſily ſubject it to the Eye, but that power is not allowed me, and therefore I truſt that no man will make an evil Interpretation of what I have ſaid, ſeeing that thereby I aim at nothing but the glory of God, and the profit of my Neighbour.

There is no need for any man to ſeek many things from the Old and New Philoſophers, ſeeing that by reading and conſidering the Divine Writings of *Moſes*, the Prophets and Apoſtles, he may obtain his deſire, and may without doubt, in them, find the Stone of Philoſophers deſcribed, provided he ſhall have but a little knowledge of Nature. I will ſay no more, but that the infallible Truth occurrs in thoſe. All theſe things are to be taken ſo, that things Divine may be underſtood in a Divine ſence, and Natural things in an Elementary ſence, without changing or mixing, ſeeing that they have no Communion among themſelves.

But leſt it ſhould ſeem to any, to be abſurd, that St. *John* the Evangeliſt ſhould make Gold of Sticks or Twiggs, and Gemms of Stones, as the ſaid Hymn teacheth, by an Art indeed great, and to be admired, I have thought it neceſſary to open and ſhew to the Unskilful by what means that might be done.

In the firſt place, this was poſſible to St. *John*, as he was a man abundantly gifted with the Holy Spirit, and ſeaſoned with the Salt of Wiſdom, ſo that he might perform this action ſupernaturally, as well as naturally, ſeeing that he was endowed by the holy Spirit, without all doubt he had alſo the natural Light in his poſſeſſion.

But by which of thoſe powers he effected this, is not for us to know, nor doth it behove us to know. But becauſe few will believe that St. *John* wrought the ſame by natural means, and many not believing in Nature and Art, will only ſay, that it could never be that Wood ſhould be tranſmuted into Gold, and Stones into Gemms. And although the later ſhould be in ſome ſort credible, by reaſon of the alliance or likeneſs between Stones and Gemms, nevertheleſs the former, by reaſon of the great diſagreement between Woods and Metals, inaſmuch as they belong to divers Kingdoms, they object, exceeds all Belief, and other Objections of this ſort, may be found among the Unskilful, by reaſon of the external ſpecies of place But ſuch things are wont to move no admiration in Philoſophers, much leſs any doubt, ſeeing that they are not ignorant how great familiarity there is of the Vegetable Kingdom with the Mineral, both which have their Riſe from the ſame Subjects, *viz.* Salt and Fire, which their Anatomy doth clearly demonſtrate. And although this may exceed the Capacity of ſome, yet it doth not thence follow that it is not true. If all things were to be ſpoken truly and openly, I confeſs there would be found a very ſmall number of thoſe who rightly underſtand Nature, ſeeing that almoſt all men who have but frequented a School for ſome years, and obtained any thing of Latin, whether they underſtand Nature, or are ignorant of her, will be taken for Philoſophers, traduce thoſe Philoſophers who are illuminated by the light of Nature, with ſtrange Cavillings and wicked Lyes, every where ſetting forth themſelves by their own ignorance. Therefore it is no wonder that the Secrets of Nature ſhould lie hid, and by the ignorant and unskilful of this ſort be all taken for Fables and fooliſh Whimſies, which their Sheeps Brains cannot reach. But who is able to cure this Evil? Perverſe manners are to be left with a perverſe World. But that I may prove and demonſtrate that it is not altogether impoſſible for Art to tranſmute Wood into Gold, I will point out by what means it may be done.

Firſt, Then it is manifeſt before all things, that all Wood and every Herb hath its original from a certain ſulphureous ſalt, to which Metals alſo owe their Riſe and greatly agree in ſimilitude, and by an intimate agreement in the ſame name; ſo that how eaſily a Mineral ſuffereth it ſelf to be changed into a Vegetable, and that again into a Mineral, I have ſignified in other places of my Writings. Indeed if you ſhall look upon the external difference of any Wood or Herb, and a Metal, it will indeed appear great; but being reduced to their firſt matter, they will not differ in any diſcrimination; as is manifeſted in my *Continuation of Miraculum Mundi*.

Therefore if the firſt matter of Vegetables be adjoined to any metallick ſeed, this is nouriſhed by that; and again, if a metal be reduced to its firſt matter, and any Vegetable ſeed put to it, that will be changed into a Vegetable; which Experience hath often ſhewed me. But if thoſe two had not a great affinity with each other, they would not ſo eaſily admit of a mutual converſion one into the other; the ſeeds indeed differ between themſelves, but they agree in the firſt matter, which appeareth thus: If a ſulphureous ſalt, not corroſive, be mixed with ſand, and moiſtened with water, and the ſeeds of divers Herbs ſowed in it, for every ſeed doth thence attract its own nouriſhment, every one, according to its ſpecies, producing its like, endowed with various colours, ſmell, and proper taſte, powers, and virtues, all which proceed from one only ſalt, and are manifeſted by the heat of the Sun, and the operation of the internal Archeus. But to make the matter more clear, it is to be known that the principals of Vegetables are Water, Salt, and Sulphur, from which alſo Metals take their original, and not from running Mercury, as many think. For that *Argent-vive*, in its own peculiar nature, is alſo a metal ariſing from the ſame three principles, from which the other metals, and all Vegetables draw their original, *viz.* from Water, Salt, and Sulphur, which their Anatomy maketh manifeſt. Here the rout of Unskilful men will take Counſel to refel this my opinion, inaſmuch as it will ſeem worthy of credit to few. But the cauſe of this incredulity is the rudeneſs and unskilfulneſs of men of this ſort, who having no Experience in Natural things, nor in no wiſe enlighte-

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ned by the Light of Nature, are blinder than a Mole.

Thoſe things which hitherto I have ſo often, and with ſo many words inculcated, the ſame I here repeat and affirm, to wit, That a Metal may be converted into a Vegetable, and that again into a Metal, and that no Vegetable is found, from which a natural and yellow Sulphur, in all things like to the Mineral, may not be prepared; and this Sulphur prepared of any Vegetable, if it be adjoined to any fixed metallick Sulphur, it is maturated by the ſame, into a metal, yet not without a *medium*; as I have often indicated in my Writings, and that *medium* I have ſaid to be Salt. Therefore whoſoever knoweth how to adjoin any immature ſulphur, whether Vegetable or Mineral, to any ripe Metal, the fixed and conſtant ſulphur of Gold and Silver, will be nouriſhed and encreaſed by the Vegetable or Mineral ſulphur, not fixed, and will tranſmute that into the ſpecies and property of the other, as the Ferment ſhall be white or red, in like manner as the ſeed of any Vegetable doth. So gold and ſilver may be made of a ſulphureous ſalt, according to any ones will, which nevertheleſs requires a due time, ſeeing that a tranſmutation of thisſort is perfected gradually, and by a due heat, as alſo in the propagation of Vegetables & Mineralsit is wont to be done. From theſe things it appears, that this Tranſmutation is the meer Work of Nature, which many Experiments which I have made, and yet am able to make, do evidently demonſtrate; therefore there is no reaſon why ſuch things ſhould ſeem ſo wonderful or abſurd to any.

Whether St. *John* performed the Tranſmutation of which we have ſpoken, by the help of any natural Art, or whether he did the ſame by a Divine Power, we will not here diſpute; but let it ſuffice to have demonſtrated that ſuch things may be performed by a natural reaſon.

For when Wood, Bread, or piece of a Bone; or alſo any Herb ſhall be adjoined to its own ſalt, in due manner of Art, and reduced to its firſt matter, that ſalt tranſmuteth the Flower, Bread, Wood, or Herb into a ſulphureous ſalt, which encreaſeth the growing faculty of Vegetables and Minerals. A ſalt of this ſort being mixed with a ſmall quantity of white Flint reduced to powder, and melted in a ſtrong Fire, will give a red and pellucid ſtone or glaſs, which if it be kept long in the Fire, it turneth green, and at length black, like a Coal, and acquireth ſo great hardneſs, that it may be cut and poliſhed after the manner of other precious ſtones. Here the deſirous of Art may ſee, that by one and the ſame way, and in one and the ſame time, that Gold may be prepared of Wood, and fair and pellucid ſtones, of various colours, of white Flints. But that the Eyes of the ſtudious of Divine and Natural things, may be the better opened, I will more clearly expound what the firſt matter is.

Therefore, as to this firſt matter, of which we here ſpeak, that of it Metals no leſs than Vegetables may be brought forth, it is to be known how eaſily it may be prepared by the help of Fire, and of a certain Salt not corroſive, of Metals, Vegetables, and Animals, and indeed ſo ſwiftly, that in the ſpace of three hours a piece of Bread, Fleſh, or of any Metal, may be tranſmuted into a ſulphureous ſalt. The ſame thing alſo happeneth in the ſtomachs of Men and Beaſts, in which the Vegetables and Animals which are eaten, are conſumed in the ſpace of 24 hours, and tranſmuted into that ſulphureous ſalt from which they have drawn their Riſe. But Metals being too fixed and compact, thoſe ſtomachs have no Juriſdiction over them, inaſmuch as they are not able to reduce them to their firſt matter, except the ſame were ſo reduced before, and ſo ſhould come into the ſtomach, opened by a radical ſolution, and ſo are digeſted and conſumed like Animals and Vegetables. But what need is there of the help of humane ſtomachs to perform ſuch things, ſeeing that Operations of this ſort may be perfected by the help of Fire and Art. A moiſt putrefaction without the help of Fire, performeth the ſame thing in Vegetables and Animals, in a long Proceſs of time; but in Metals very difficultly, and not except in a very long time. Neither are humane Stomachs themſelves alike potent, in reducing every Vegetable to its firſt matter, inaſmuch as they exerciſe their power only upon thoſe Vegetables which by a due Preparation are firſt rendered fit to be digeſted and concocted by the ſtomach, and reduced to their firſt matter. For firſt they are boiled, roaſted, or prepared by ſome other way, becauſe thoſe things which are admitted into the Body, contrary to humane Nature, exerciſe nothing but venomous Operations. By a like reaſon Metals and Minerals refuſe to be brought to their firſt matter in a humane Stomach, ſeeing that the ſtomach cannot ſuffer them, as being averſe to humane Nature, but ejects them as a certain Venome, not without great peril of Life. Here I except Gold, which Metal only, being firſt rightly prepared, doth not refuſe reduction into its firſt matter in the ſtomach of Man; nevertheleſs Art doth it more eaſily and readily. He who knoweth not this Artificial Reduction, muſt be content with the Natural, which nevertheleſs is not deſirable, by reaſon of the toil, ſtink, and length of time which it requires. For which reaſon it is of leſs account than the artificial. Some of the ancient Philoſophers have indeed (not without reaſon) uſed the Dungs of Animals, by reaſon of the incredible Virtues which they poſſeſs. But becauſe we have better and fitter Medicaments at hand, not without reaſon we omit thoſe, and leave them to them who labour under the want of better; which happeneth to Country people, who being remote from Cities and Medicines, are wont to uſe Dungs in various Diſeaſes inſtead of Medicines. They purge the Bodies of Boys and Girls with Mouſe-dung, Horſe-dung, and Gooſe-dung, being diſſolved in Wine or Beer, and ſtrained through a Linen Cloth, they uſe in curing the Falling-ſickneſs by Sweat. In the Cure of an *Eryſipelas*, or *Burns*, or *Scalds*, they uſe Hoggs-dung; and in all kind of *Swellings* Sheeps-dung; in a *Quinſey* white Doggs-turd, or Humane dung, as alſo to other Diſeaſes of the Neck, which the rude and ignorant are wont to drink againſt various inward and outward defects of the humane Body.

I remember once to have ſeen an admirable Cure done in a moment by the help of humane dung, in a certain, long, and tedious Diſeaſe, which it plainly and ſwiftly removed, drawing thoſe into admiration who were ignorant of the reaſon of ſo ſwift a Cure. He that underſtandeth the nature and properties of Dung, will eaſily perſwade himſelf, that wonderful things may be effected by the ſame. The reaſon is ready, becauſe humane Dung is nothing elſe but Bread and Fleſh, reduced into their firſt matter, all their Bonds being looſened, and rendered fit for the exerciſing of their Virtues; and from humane Dung is elicited, without any great difficulty, a natural Burning, and like to Mineral Sulphur, of which being mixed with Coals and

Salt-petre,

Salt-petre, Gunpowder is wont to be made ; as alſo a certain Salt, not much unlike the *Sal Enixum* of *Paracelſus*. And both thoſe, to wit, that Sulphur, and that Salt, the Humane dung containeth in it ſelf ; the which may put forth their wonderful Virtues, by admirable Operations, I think may be doubted by no man. Put a piece of Gold for a time into Humane dung, and afterwards cleanſe it by waſhing, you ſhall find it equally yellow, as if it had lain in a Lixivium, in which common Mineral Sulphur had been diſſolved. And that yellowneſs adhering to the Gold [*or rather Silver, for the better diſtinction*] is but the Vegitable or Animal Sulphur ariſing from the Food which the Man hath eaten.

This I ſay is the cauſe that the Dungs of Men and Beaſts produce ſo great effects, which Bread and Fleſh otherwiſe cannot produce, before they are reduced into their firſt matter. Nevertheleſs, I do not therefore admit them of value in Medicine, but only ſhew whence they have their Virtues of reſiſting Diſeaſes, that by this means I may aſſert Vegitables, Animals, and Minerals do highly exerciſe their Virtues, when they return to their firſt matter, not that it is at all neceſſary to be done in the Stomachs of Animals, ſeeing that the Operation of the fire alone ſerveth for this reduction.

In what manner ſoever this firſt matter be made, whether by the Stomachs of Animals, or by the Operation of fire, there is no great difference, only that which is made by fire is purer, and not ſo ſtinking, as that which is done by the Stomachs of Animals, although in gilding of Silver, they are found to be equal, and obtain a ſulphurous nature. And hence it appears, that there lies hid in Bread, and in Fleſh, a fugacious and ſpiritual Gold. And for this reaſon I conclude, that in all things of the World born of Salt, and brought to Maturity by the heat of the Sun, there is neceſſarily reconded a fugacious Volatile, and ſpiritual Gold, yet in greater quantity in one ſubject than another, but not manifeſted till the body containing it, by the help of art, returneth to its firſt matter.

The which Art, ſeeing that it is out of the reach of Ruſticks, it is but reaſonable, that they ſhould make uſe of Dungs, without any ill interpretation. For in the greater, and more powerful Virtues to be produced, Dungs are found more potent than thoſe things from which they proceed. Bread, Wine, Fleſh, and the like things deſtinated for the nouriſhment of the Body, are not Medicines, but only Nutriments, from which, after an Animate Body hath ſeparated its Aliment, that which is left, obtaineth Medicinal Powers and Virtues ; and did I not fear that this dungy diſcourſe ſhould lead me too far from my purpoſe, I could declare things to be admired of Dungs. For Metals alſo being prepared but once by the help of Animals, may be wonderfully Converted, and reduced to their firſt matter, although it is in no wiſe neceſſary that we ſhould take that way of doing it, ſeeing that an eaſier and better way is at hand, than that by the help of Animals. But he that is ignorant of this artificial Converſion, muſt be content with the other, till the teachings of experience, ſhall bring him to better things.

That incredible Virtues are hidden in the Dungs of Animals, *Paracelſus* at ſome time declared, in the preſence of ſome Noble-Men, to ſome Unskilful Phyſicians, who being moved with anger, departed, thinking themſelves to be highly reproached by *Paracelſus*, becauſe they had asked of him ſome great Medicinal Secret, and he had ſet before them Humane Dung. But without doubt, he would have ſhewed them great Secrets hidden in ſuch a matter, which exceeded their dull Capacities, but not the incomparable Ingeny of *Paracelſus*, who without doubt had revealed to them thoſe Secrets which himſelf had found, had they not gone away from him with wrath and Indignation.

In another place of his Writings, he ſaith in expreſs words, that he that knoweth not his own Dung, knoweth nothing at all, and is a blind Aſs, to whom nothing of Heaven and Earth is manifeſt; which words do plainly prove *Paracelſus* to have been able to perform many things with Dung. But this I aſſert, that this my Tranſmutation, and Converſion of things into their firſt matter, doth far excel that which is done by Dungs, in as much as being endowed with a greater efficacy, it appeareth not in the ſpecies of Dung, but of a Sulphureous Salt, and may commodiouſly be uſed by all Men, and in all Diſeaſes. Its Virtues are not reſtrained to any particular Diſeaſe, but operate generally, not only in all Humane Diſeaſes, but alſo in all Infirmities and Defects of Vegetables and Minerals, as I have ſhewed in other places of my Writings. What I have here ſpoken of Dungs, I would not have any think that I have done it to the end that I would have them uſed in Medicine, but for this reaſon, that I might ſhew the great difference between an Herb as brought forth by the Earth, and that which being firſt digeſted, the Animal Stomach hath freed from its Bonds, and reduced it to the operation of its hidden Virtues : The which I have very clearly proved by the Dungs of Animals. Therefore the expert and learned Phyſician, ſetting aſide all Dungy Medicines, may by the Spagyrick Art, reduce his Herbs to their firſt matter, that is a Sulphurous Salt, and may perform by Salts of this ſort, more and greater things, than by the unprofitable, and deſtitute of all Virtue, Barks, Shells, and empty Husks, which a multitude of Phyſicians are accuſtomed to uſe at this day. I have thought fit to expoſe to the light theſe few things, concerning the firſt matter of things, and Dungs, which are not diſtinguiſhed, by any great difference: But let us return to the matter it ſelf, and ſee how fairly the light of Nature ſhineth from the Divine Light.

As God formed the firſt Man *Adam* of the Earth, and breathed into him a living Soul, and placed him in Paradiſe, and the Devil withdrew him from God, and Precipitated him into Eternal Damnation, uſing the Serpent as a Mediator : So alſo, Man who fell from his Creator, being deceived by Satan, by the Divine Serpent and Mediator, to wit, Jeſus Chriſt, was again to be reconciled to God, which could no otherwiſe be done, and God permitted it ſo to come to paſs, who otherwiſe might have bridled the Devil, ſo that he could not have ſeduc'd a Man, and alſo could have kept Satan himſelf in his Angelical Eſtate, that he ſhould have had no hatred againſt God or Man. Now this Philoſophick Elementary Secret may be compared, in all points, to the Heavenly Miſtery. For if the Elementary Sun, in the ſeparation made by God, in which he lifted himſelf on high from the rude and formleſs Chaos, had not ejected his earthly and corruptible Sulphur, and ſent it down to the Abyſs of the Earth, the Rays of the Sun, when they now penetrate the Earth, would not be hindered to Communicate with the Solar Progeny or Iſſue, ſo that the Bowels of

the Earth would produce nothing but Gold; and the other Metals, *viz.* Iron, Lead, Tin, Copper, *&c.* ſhould not be, which nevertheleſs are brought forth impure owing their received impurity to that impure, ſtinking, and earthly Sulphur, which is mixed with a Metallick Body in the Bowels of the Earth.

But to help Metals infected with a Sulphur of this ſort, that they may become like to Gold, as the Son of the true Sun, it is neceſſary that Sol ſhould humble his Son, to wit Gold, and ſuffer him to put on a Saline nature, whereby he may become the Medium of reducing radically the imperfect Metals to perfection. Salt is the only Medium of reconciling Gold to common Sulphur, and of making of it a Tincture, changing the imperfect Metals into perfect, of which all the Philoſophers, whom few underſtand, have written ſo clearly.

Concerning this matter I have written very clearly in a Treatiſe, which I lately publiſhed, deſcribing a Saline Water, or *Aurum Potabile*, which certainly containeth a great Miſtery, although very many can neither underſtand or believe it. For becauſe it wholly tingeth Mercury, it cannot be a ſolution of common Gold, becauſe no Water, nor no Liquor prepared of Corporal Gold it ſelf, can give to Mercury a conſtant Tincture. It may indeed be done that Gold diſſolved, may adhere to *argent vive*, or that to Gold, ſo that both may paſs together into a white Amalgama: But that ſuch an Amalgama ſhould become yellow and hard, or the Argent vive tranſmuted into Gold, will never happen, although it ſhould be digeſted or cocted an hundred years in ſuch a Golden ſolution. For the ſnowy whiteneſs of Mercury never ſuffereth it ſelf to be tinged or coloured by common Gold, but is obedient to any tinging and coagulating Sulphur, concerning which in the Appendix to the Continuation of *Miraculum Mundi*, more things are declared. Let theſe few words be well examined, in which will be found a great Miſtery; to wit the whole Philoſophick work it ſelf, provided the light of Nature ſhall a little ſhine. Nevertheleſs this is not ſo efficacious, as that it can reveal ſuch Miſteries to a Man who wants Venus to open his Eyes, with which he may behold the light of Nature. For without God, there is no light, and without light, no life, no Underſtanding nor Wiſdom; Obſcurity is Death, and Death Eternal Deſtruction.

Salt ſpeaketh thus of it ſelf; *I am fire and life, and no Combuſtible Sulphur can be made Gold, except I be the Mediator.* Salt is the only Medium between Combuſtible and Corrupt Sulphur, or the imperfect Metals, and Gold. The pernicious Sulphur or Satan, which lieth hid in lean Death, is firſt to be vanquiſhed and overcome in Hell, then ariſing a Glorified Body, it occupieth its Royal Throne, and Converteth the Diſeaſie Metals into Gold.

But to delay the Reader, burning with a deſire of Divine and Humane Myſteries, no longer, I will deſcribe the whole Operation in a Philoſophick manner, briefly, clearly, and truly, as I have oftentimes done it with my hands, but never yet, by reaſon of various Obſtacles have brought it to a due perfection.

To the common Salt of the Earth well cleanſed, adjoin a Terreſtrial Sulphur in a due weight, the injected Rays of the Sun being firſt received by the Salt; the Salt and Sulphur will fight in Hell ſo long, until the Salt overcometh the Devil and Death, and ariſeth a Glorified Body, by which its ſick Brethren are to be Cured, or Converted into Gold.

This is the whole Operation, in which nothing is omitted, but the weight, and the name of Satan or Death. But the name of the Salt I have already manifeſted, and nothing here remains, but that I ſhould expreſs the name of Satan and Death, which for the Glory of God and Profit of my Neighbour, I will not conceal.

The Death and Devil of all Metals, is that Combuſtible Sulphur, which having its ſeat in all things, is equally in Vegitables, Animals, and Minerals. Conjoin Salt and burning Sulphur, and cauſe them to fight until the life (that is Salt) ſhall overcome and ſwallow up the burning Sulphur, which is Death, and from both will proceed a Glorified Body, like a fair Ruby, or pellucid and red Carbuncle, by which the Diſeaſes of Men and Metals may be cured. In this manner of operating, delivered in few words, lieth hid a miſtery of great moment, which one of a thouſand will ſcarce underſtand, and by reaſon of the vileneſs of the matter, it will be to many offenſive, and contemptible. But we will have no regard to Fools, blinded with their own folly and madneſs, who ſeek good where it is not to be found, and neither do nor will know it when put before their eyes. If after a Sophiſtical manner I ſhould have propoſed ſome Chymical Operation with a long and tedious Circumſtance of words, I make no doubt, but the blind World would more readily have received it, than a ſhort and compendious way of operating of this ſort: Whence *Sendivogius*, and other true Philoſophers, have not ſaid without cauſe, that if the true manner of Operating ſhould be revealed to any man, nevertheleſs, by reaſon of the vileneſs of the matter, it would not be believed. For this reaſon, ſome will object; I pray what good is like to be in ſo vile and abject a thing as Salt? And when was Sulphur wont to be made Gold? Hence alſo, they neither will nor can believe the truth.

But that I may clearly prove, that there are Secrets hidden in Salt and Sulphur, it behoveth, that I manifeſt thoſe things more largely. Salt is the Symbole of Eternity, ſeeing that it is not diminiſhed nor altered, neither by Fire, Air, Water, or Earth, but preſerveth all things for a long time from Corruption. It is a thing well known, and converſant in the ſight of all the World, and is a help to all other things, yet wants not the help of any thing. Burning Sulphur is the Symbole of Death, and the true Infernal Devil, which no Element, nor any other thing (one Salt excepted) is able to vanquiſh and overcome. For although Sulphur not yet freed from its Bonds, being ſurely kept in its Priſon ſhould ſuffer it ſelf for many years to be tortured by the fire, yet would it not receive any ſenſible mutation, nor any loſs of weight, provided there be no open paſſage for its Exit. By the like reaſon, if it ſhould abide an hundred years, in the Air or Water, yet it would in no wiſe putrifie. Salt only overcometh it, and changeth it into a Carbuncle; I ſay into a Carbuncle, ſo called, becauſe ſhining with a pellucid redneſs, it ſheweth like a burning Coal, and for its excellency may be accounted among Precious Stones. It is found by few, but they who have it in poſſeſſion, hide it, nor do they expoſe it to Sale like Diamonds, or other Gemms. It is not digged out of rough Mountains, as others, but is ſought by Prayers to God, and acquired by the Labour of the Hands.

But why do I ſay ſo much? Seeing that I have already exceeded my due limits, yet I know, that what I have

I have ſaid will exceed the capacity and underſtanding of the Impious. But that no man ſhould doubt, that ſalt and ſulphur are moſt noble Creatures, although very lightly eſteemed, I will prove that ſalt is the *beginning and end of all things*. In the Creation of the World ſalt was firſt made, from which afterwards the four Elements proceeded, ſo that by the Philoſophers ſalt is called *The Center of the Elements concentrated*; and by the ſame reaſon, by which it was the firſt, it ſtill is, and remaineth the laſt. All things ariſe from ſalt, and after they are deſtroyed by death, do again return into the ſame. *Et ſal theſauros grandes & poſſidet ignis. In Salt and Fire are contained great Treaſures.* Salt is Fire, and Fire is Salt, and they contain in themſelves a third thing, to wit, an hidden Spirit. When the moſt Omnipotent Creator had pronounced the word *Fiat*, and had created ſalt, the *Chaos* was afterwards parted or divided into four portions, and divers ſeats or places aſſigned to each, and alſo each had its Name given to it; which being done, the Elements took their beginning, inſtituting in themſelves mutual actions, and ordaining their generations. The moſt pure and ſubtile part became the Firmament, and gave the Sun, Moon, and Stars the more groſs and heavy, joined together into a maſs of Earth, and like fæces or dreggs, occupied the loweſt place. The watery and airy Portions encompaſs the Terrene Globe.

Now when the ſuperiour or fiery part, with the Stars operate and immit their powers upon the lower part or Sea, the Water is rendered pregnant, or as it were with young, and generateth Salt without intermiſſion. But leſt this continual generation of Salt, effected by the operation of Fire, ſhould be produced in the Sea or Water only, and the reſt of the Elements ſhould be idle; God hath alſo given to each of theſe its proper Gift, *viz.* to the Air, that it ſhould receive the ſeed ſent from the Stars, and communicate it to the Water; to the Water, that it ſhould diſtribute the received ſeed through the paſſages and clefts of the Earth, that ſo by this reaſon Minerals and Metals of every kind might as well be produced within the earth, as all kinds of Herbs, Fruits, and Trees, without it in the ſuperficies, ſerving for the nutriment, encreaſe and multiplication of Animals. This thing is witneſſed by daily Experience; for if the Sea ſhould not diſperſe its ſalt through the earth, ſo many excellent Minerals could in no wiſe exiſt in its bowels, neither in its ſuperficies could not ſo many and ſo great Trees nor ſo various and manifold Herbs, and ſuch divers ſorts of Graſs, be brought forth. For as much Salt as Vegetables draw to the external ſuperficies, and Minerals to the inward bowels, ſo much the Sea or Salt-water reſtoreth to them, ſo that the Earth may never labour under a want of its ſalt, of which the Indigent are to be rendered partakers. For if the Sea ſhould not provide for the Globe of the Earth a continual nouriſhment, the Earth it ſelf being deſtitute of the ſame, would not be able to afford a due aliment and encreaſe to other things. For a Cheſt which is continually exhauſted by taking out, and nothing put in, at length being empty, retaineth nothing. But becauſe the wiſe Providence of God hath appointed that the Terene Globe, without intermition, ſhould be fertile in bringing forth good Fruit for the nouriſhment of Mankind, neceſſity requireth that a perpetual aliment ſhould be afforded to the Earth, from the Sea, for which end the Stars never ceaſe in animating the Air and Water with their influences, that the Elements, by mutual helps, might ſuccour one another, and no ſtop or hinderance ſhould be put to the courſe of Nature. For if one Element only reſt, and ceaſe to perform its office, the other would alſo ceaſe from working, and fall into ſuch a Reſt.

Except the Stars ſhould generate Salt, and the Water receiving it, ſhould diſperſe it through the Earth, by what means ſhould it come to paſs, that any thing ſhould be brought forth, grow, and encreaſe? The whole Orb of the Earth would at length grow dry, and periſh, which nevertheleſs by the perpetual acceſs of ſalt, never intermitteth, but is encreaſed and ſuſtained.

There is no Stone which can want Salt, which argueth Salt to be its beginning and nouriſhment, and that thoſe Mountains, in which is a great quantity of a ſaline nutriment, do grow and encreaſe thereby, as receiving it in a plentiful manner from the neareſt ſea. This is no where more eaſily to be found, than in thoſe places in which the Mountainous Coaſts are very fertile and fruitful in Metals, for the acquiring of which the Rocks are to be digged through with holes in height or depth, affording a commodious going in and out. But when in places of this ſort all the Metals are dug out, or the metallick Veins are broken off (& loſt) from the tranſverſe Walls, or ſides, or alſo from the ſliding or dropping Waters, they are rendered unprofitable; and for that reaſon ſuch a Mountain is to be deſerted; nevertheleſs it doth not ceaſe to grow, and indeed as well the Stones as the Metals, having their ſeat in it. Whence it is wont to happen, that thoſe holes or paſſages abovementioned, through which one might have walked upright, in a long proceſs of time, do ſo grow together, and become ſo little and ſtrait, that he who deſires to go into the moſt intimate Penetrals, muſt ſtoop even to the ground. This is to be underſtood of ſuch ſorts of Stones as abound with ſalt, for places not paſſable by ſalt, are found to be fit neither for the generation of Stones, or of other things, as alſo thoſe which refuſe to admit Water: For Water is the Vehicle which carrieth Salt through the whole Globe of the Earth, and by it diſperſeth its nouriſhment, as the Air is the Receptacle of the Aſtral ſeed, of which the Water is to be rendered a partaker.

Thoſe things which I here write, altho' they may ſeem to be vile, and of ſmall moment, nevertheleſs they are moſt true, and cannot be rendered more clearly and truly by any man. And altho' the ſame might be propoſed by a more prolix deſcription, yet there is no need of that prolixity, when all things may be delivered more compendiouſly.

Nevertheleſs, that I may as yet confirm by a clearer demonſtration, that the Life of the whole World is Salt, and that of it all things take their original, I will bring for witneſs the Univerſal Opinion of all the Philoſophers unanimouſly aſſerting, That all things being reduced into their firſt matter, return into ſalt; from which Saying it followeth, that they have taken their beginning from Salt; and this Argument can be refelled by no man.

Now ſome man may ſay, How ſhall I be ſure of this? or, By what reaſon may all things be reduced to their firſt matter? To obtain the knowledge of thoſe Labours and Operations, it behoveth thee by experience to go to clear Philoſophers and Chymiſts, becauſe I intend not at the preſent to treat of operations of this kind. Every Countryman taketh notice of the Work of Nature, who ſeeth daily, that every Herb, every Wood, every Man, and every Animal, after that

it hath attained its end by Death, passeth by putrefaction into a sulphureous salt, hidden indeed in a putrefied Dung, but unknown to him, although with the same he dungeth his poor and barren Land wanting salt, and rendereth it fat and fertile. As long as the Herb, Wood, and Animal enjoyeth its own vital Air, it doth not dismiss its salt by which it is preserved, but superfluous fæces. But as soon as death hath taken away the vital Air, and dissolved the *Vinculum* or Bond, the rest of the parts can no longer subsist, every one going out to that place whence it proceeded. Rain dissolveth the salt, and by all Rivers carrieth it back to its Mother the Ocean, from whence it had come forth; the spirit is attracted by the stars; the earthy matter remaineth in the Earth, to which it oweth its Rise. For the Fruits of the Earth do not obtain this universal nourishment from the Sea, by right of Inheritance, but they take it only as a profitable Aliment, given them to enjoy as long as they live; after death, the universal Mother, to wit, the Sea, taketh it back, and bestoweth it upon others which she hath accommodated to it. If thou hast a mind to make trial of this thing by another way, burn any Herb, Wood, Stone, or Animal in the Fire, for so whatsoever is spiritual flieth into the air, and the salt will remain in the ashes, to be extracted with water, and separated from the dead earth. Salt therefore in all things is *the beginning and the end*, and most worthy, which is accurately to be noted, inasmuch as it is that which containeth great mysteries and secrets.

He that is ignorant of these things, deserveth not to be called a Philosopher, but rather a proud Ass, knowing and maintaining nothing but slanders and calumnies, with which, to conceal his own ignorance, he cavilleth at the Truth, and bringeth it into contempt. The Ancients were not ignorant of the excellent Virtues hidden in salt, so that many of the Philosophers have thought that something Divine was hidden in salt, and therefore they have expresly written, that the knowledge of God can be drawn from nothing more clearly than from Fire and Salt. Therefore they at all times adjoined to their Sacrifices and Altars Fire and Salt, as Symbols of God and Immortality. They were afraid to touch any Fire or any Salt with unwashen hands, lest they should draw the Divine Wrath upon themselves, if they should defile those most noble Creatures with impure hands: They swore by Salt and Fire, not using any greater Oath; and in any matter to be searched out by a diligent examination, they proposed to the interrogated Salt and Bread, that so he should witness the truth; whence perhaps came that Proverb, *Salem & Mensam, non violabis.* Our Saviour Christ is called *The Salt of Wisdom.* In holy Baptism, the Priest putting a little Salt to the mouth of the Infant, is wont to add these words, *Receive the Salt of Wisdom*; which custom, with the burning of Wax-Candles, alwaies adjoined in Baptism, that Christ might be remembred to be the light of the world, is now in many places abrogated by Innovations; so that it is to be feared, if the world should continue long, the matter would come to that pass, that it would also be prohibited to name the very Name of Christ. For truly it is already come to that boldness, as to prohibit the Celebration of our Saviour's Nativity, under the injunction of a certain penalty. O the miserable condition of *Christendom* at this day!

Christ himself calleth his Disciples *the Light of the World*, and *the Salt of the Earth*, *Luk.* 19. 9. Salt and Water, by Faith and Baptism unite God and Man: so also fixed Gold and combustible sulphur are copulated by the help of salt and water, which thing, although it may seem impossible, nevertheless it is very well known to true Chymists; for when they are minded to separate melted Gold and Silver, they are wont to inject a little sulphur, which interceding between both, like a Partition wall, disjoineth the gold and silver, by reason of the enmity which it hath with the gold, disagreeing with the sulphur by so great an antipathy, that it can at no time suffer it. Nevertheless salt and water take away this Enmity, reducing both into favour with each other, no otherwise than Christ, the Salt of Wisdom, and the Divine Light, as a Mediator, reconcileth the filthy sinner to God.

Christ saith in certain places, *salt is good*, or *it is a good thing*: When the Earth wanteth salt, being dead, it bringeth forth no Fruit; the same is Dung, when destitute of salt.

Here I have the eternal Truth Himself my Witness, reproving my impious *Farnnerian* Enemies, who endeavour to refel my *Miraculum Mundi* with their false Calumnies and Cavils. In which Book I have demonstrated by most manifest Arguments, that the Earth is rendered fat and fertile, not by Dung, but the Salt which is in it. These Calumniators being convicted by the true testimony of this witness of their shameful Lyes, must without doubt bridle their venomous Tongues, and for time to come, cease to tear me with their savage Teeth. *The Truth may indeed be pressed, but never quite born down*; for GOD at length will bring it to light, although for some time it may be pressed and perplexed by Satan the Father of Lyes, and its capital enemy.

In another place Christ saith, *None is good but God.* Also in another place, *Salt is good.* This is truly a most efficacious testimony, and famous praise, by which Salt is extolled.

Salt is also taken for Understanding and Wisdom, and for that reason a rude and ignorant man is called dull and insipid, and in the same sence a speech is said to be unsavory or witless, as if having nothing of salt, it were unhandsome and stupid; whence the vulgar Proverbs are wont to say, How heavy and insipid is this man? How dully and unsavourily doth he speak? Also that usual saying, *That which relisheth, nourisheth*; and so on the contrary, where there is no savour, there is also no nourishment. There is nothing can be brought forth in the nature of things, without the *medium* of salt; yea, Man himself is not born without the Sun, Man, and Salt. Therefore a certain Philosopher saith very appositely, *The vigour of salt is fiery, and of a Celestial Original.* The sun and salt are the Parents of all things, which procreate all things, and without which nothing is procreated; Bread and Flesh, which are seasoned with salt, afford more Virtues than all other Foods which are not salted. Salt being added to Wine in its fermentation, rendereth it stronger and sweeter.

NB. That nevertheless the salt here spoken of ought not to be common and vulgar salt, which doth not give a good relish to Wine. Empty Hogsheads may indeed be purged by common salt dissolved in warm water, so that every ill taste or smell may be drawn out, and the wine preserved in its vigour. Moreover salt exceedeth wine in corroborating the heart of Man, and is therefore in many things to be preferred before it. And he that knoweth how to conjoin true salt with wine, and in the same to dissolve the Sun of the earth,

(which

(which is Gold) may from it extract a Royal Medicine, as is shewn in other places of my Writings.

For any man of understanding may easily see, that if the noble virtues of these three things Corroborating the heart, to wit, Gold, Wine, and Salt shall be joined together, what a noble Medicine will proceed from such a Conjunction. *Paracelsus* hath not without reason determined with the Philosophers, that no true *Aurum Potabile*, can be prepared without Salt. If there were no Salt in the Earth, neither Herbs, nor Grass would be brought forth for the food of Animals, nor the life of Man sustained. All Animals also do therefore desire the Salt of fruitfulness, concerning which, you shall find more, in the description of my Green Liquor. The Combination of Gold and true Salt, restoreth decaying seeds to their pristine fruitfulness, and also restoreth to half dead and barren Trees, their faded greenness, if that Medicine be applied to their Roots. On the contrary, common salt before preparation, is hurtful to Vegetables, and killeth them by its Corosion, but after preparation it exceedeth dung in fatening them: Nevertheless, there are some Vegetables, which are able to bear the Corosive power of salt, *viz.* those which grow spontaneously upon the Sea-shore, as the Herb *Kaly*, of which the Ancients prepared their *Sal Alkali*; for being burnt it leaveth a very sharp salt. Also all those Fruits which are of a sowre, or bitter Taste, or have sowre, or bitter Rinds, do equally bear the Corrosion of salt, as Olives, Limons, Oranges, Lentisk, and the Palm, which also rejoiceth in common salt; as on the contrary, the Vine, Grain, and Fruit-Trees are delighted with the sweeter Sun; concerning which, more hereafter.

I remember to have read, that in the Island *Sardinia*, near the City *Catar*, so great a quantity of salt hath been digged up, that it was given to the Inhabitants for their necessary uses, for nothing, and the rest was sold to Foreign Sailors and Merchants to be Exported. And the Countreymen so abounding with salt, gave it so largely to their Cattel, that they wonderfully abounded in Milk, whence they made most excellent Cheese, which was sold all *Europe* over, but whether it be that which we call *Parmasan*, I know not. But it appears, that so great a plenty of Milk and Cheese proceeded from salt only, which is also very agreeable to the Truth. The same Author (whose Name is *Bernhardus Comesius*) also taketh notice, that in the *West-Indies* there is a City standing in a sandy and barren place, abounding with a great multitude of Fishes, which are there taken. And the Inhabitants cast the Heads of the Fishes into a pit, or hole in the Earth, sprinkling them well with salt, and after a certain time taking them out, they plant or sow in every Head, a Corn of some Grain, and cast the same into the sandy Earth, and those Grains growing, do again bring forth an hundred fold. That this might be so done, is not dissonant to the truth, seeing that the Heads of the Fishes preserve the salt in the Earth, that it cannot be washed away with the Rain, nor the Grain be deprived of its Alimentary Juice. But such ways of sowing Grain, are tedious and laborious. I have a far other preparation of salt, which without much cost and labour, rendereth a great quantity of it fit to make sandy ground fruitful, and yet is not washed away by the Rain, salt is to be rendered sulphureous, that it may generally and universally nourish.

NB. Here some may say, if a sulphurous salt be the effecter of Fertility, how is it that the *Mare Mortuum*, or dead Sea of *Sodom*, abounding with sulphur and salt, doth neither bring forth Fish, nor contribute any thing to fruitfulness? I Answer, because the said Sea is full of bitter and Vitriolate Minerals, which by their Venom are hurtful to all Fish, and Vegetables, and also Fishes themselves cannot live in Waters which are too salt, which is to be observed. For every thing that is too much, is turned into a Vice. But what Fertility salt imparteth to natural things, may be learned by Fish, many thousands of small Fishes at once, proceeding from the Spawn of one Fish, which is not granted to Birds and Animals. It was not in vain that God would have King *Pharaoh* Dream first of seven fat Kine, and afterwards of other seven lean ones, descending from the Earth into the Sea, thereby signifying fruitfulness to draw its Original from the Sea. *Joseph* being illuminated by God, both by Divine and Natural light, understood this, and interpreted the Dream: To wit, that it was in the power of salt. Salt is insignized with the Title of the Fountain of Philosophers. *Hesiod*, *Homer*, *Plato*, *Pythagoras*, and other Philosophers, deliver that of all things, salt is most affine or near to God. I assert, that by the help of salt, many become the chosen Sons of God. If the Earth should want salt, there would not thence proceed any fruits affording necessary Aliment for Men, whence Mankind would perish, not being able to draw its Nourishment and Multiplication from the Air, but is constrained to take it from the Earth. Salt becometh Milk, Honey, Sugar, Wine, Bread, Flesh, and passeth into all those things which we want. Salt is all in all things, the beginning and the end of all things which God hath created.

But some man may here ask; whether therefore do all things arise from salt? Whether it be necessary that salt in the seeds of Herbs, should be changed into Herbs, in the seeds of Animals, into Animals, and in the seed of Metals, into Metals? Whether such degrees may not be sooner passed by the quicker progress of Art, correcting the more slow advance of nature? I answer; yea, it may be done, it is possible for Art to bring salt to its highest perfection, by a far more compendious way, than nature can. But by what way that may be done, is not proper to shew in this place. This I would have you to know, that wonderful Generations do arise from the Sun or Fire, united with salt, which otherwise would not appear. For Example, in the Months of *June*, *July*, and *August*, fill a wooden vessel with common water, and expose it to the Rays of the Sun, that it may night and day receive the Astral Influences, and be dried up, being dried up fill it again with more water, and so keep the Vessel always full, in which at length, from the salt contained in the water, there will be brought forth Vermin of all sorts without any seed; such as is accustomed to be brought forth in other putrid Waters, as Frogs, Toads, and Serpents.

NB. That the Vessel must be made of Wood, not of Metal, least the water should suck in a Vitriolate Juice which is adverse to the life of Animals: Also beware that nothing of Iron or Copper fall into the Vessel, and corrupt the Operation. Or fill the same Vessel with sand, and moisten it with water, then subject it to the Sun beams, and when it is dry, moisten it again, repeating the Humectations, and by this Operation you shall see various and unknown Herbs to come forth and be produced, without any seed,

as is manifeſt from other places of my Writings.

Gold the moſt conſtant of all Metallick Bodies, and as it were invincible, feareth not the violent aſſaults of any other Element, and ſubſiſteth in the fire it ſelf with ſo great conſtancy, as not to loſe any thing of its weight, although for many years it ſhould be kept in a continual torture of Fire. Nevertheleſs, ſalt draweth from it its Anima, and taketh away that fair red colour, and that conſtancy, whereby it was wont to reſiſt the fire, ſo that it obtaineth the colour of Lead, and the brittleneſs and fugacity of Antimony. A thing exceeding the credit and belief of the unskilful, although experience it ſelf witneſſeth it to be true. Hence it appeareth, that there is a greater power in Salt than in all the Elements and Elementary things, and therefore we deem it to be juſtly called the Center of the Elements concentrated. Gold eludeth the moſt potent and ſubtil powers of the fire, which nothing can reſiſt, and yet is overcome by Salt, which by a ſtupendious Miracle of Art, attracteth its moſt Noble Part, *viz.* its Anima being ſeparated from its more groſs and earthy parts. How noble a thing the Anima of Gold is, any Man may eaſily imagine, and without doubt may ſee, that it hath the chief place in Medicine. This is like to what *Sendivogius* hath written concerning his *Chalybs* ſpoiling Gold of its Anima, but although ſuch an extraction hath divers times ſucceeded to me according to my wiſh, that the Anima being extracted, the body of the Gold hath been left brittle, fugacious, and black; yet I confeſs, that the ſame Operation hath not always anſwered my deſire; as if God would not permit ſuch a ſecret to be commonly known. Therefore I am well content with leſſer things, and have ſhewed theſe things only to the end that I might manifeſt the Powers of Salt, and teach them to others: Nevertheleſs, I would not have any Man perſwade himſelf, that this Royal Medicine may be extorted from Gold, by the help of common Culinary ſalt; for to this matter another Salt is required, to be prepared by Fire and Art. But of this Artificial Concentration of Gold, the fourth part of *the Proſperity of* Germany, which God willing, ſhall ſhortly be publiſhed, will ſhew more at large. More indeed might be ſaid concerning Salt, which we leave for another time and place, ſeeing that thoſe things which have hitherto been ſpoken, ſeem to me to be ſufficient.

Therefore I conclude, and affirm Salt to be a help to all things, and on the contrary, to want the help of nothing.

Here ſome Man may ask me and ſay, Of what Salt doſt thou ſpeak, for there are many ſorts of Salt? I ſpeak of the Univerſal Salt, known to all Men, which is boiled up from Sea water, or Salt Springs, or digged out of Pits in Mountains or other places, and put to common and familiar uſes. This known Salt, I here call (and not injuriouſly) the Univerſal Treaſure, and general Riches: For it adminiſtreth Nouriſhment to the whole World, that not only the Beaſts of the Earth, Fiſhes in the Waters, and Birds in the Air, but alſo all Metals in the Bowels of the Earth may ſubſiſt for the uſe of Man, to ſay nothing of the great and Univerſal Medicine, which may be obtained by its benefit. Of right therefore it meriteth the Title of the Univerſal Treaſure of the World, ſeeing that nothing can be found, which doth not owe its Original to Salt. But that one ſalt is purer, better, and more precious than another, I do not deny, that the Original and beginning of all ſalts, is one and the ſame, and that their difference happeneth only from Accidents. For ſo long as ſalt is pure, and mixed with nothing, as it is made by the Sun in the water, it is one and the ſame, and poſſeſſeth one and the ſame Taſte, and the ſame Virtues: But as ſoon as it is mixed with other things, or changed by the fire, its firſt nature being laid aſide, it becometh either better or worſe. This is taught by Wood and Stones, reduced by the fire into Coals or Aſhes, in which part of the ſalt flieth away with the ſmoak, the reſt remaineth in the Aſhes, ſhewing a far other nature from that which it had before it was deſtroyed by the violence of fire. Indeed, by the Operation of the fire, all ſalts obtain a fiery and ſulphureous nature, and therefore neceſſarily aſſume another Property, which being well known needs no diſpute. The moſt known, moſt ſimple and void of all mixture is that ſalt which is elicited from Sea-water, or ſalt Fountains, or Mountainous Caverns. Vitriol and Alum, are indeed alſo ſalts, but infected with an Earthy and Mineral Property, and therefore unworthy of the name of ſimple ſalts.

Salt-peter is alſo numbred among ſalt, but it cannot be ſaid to be a ſimple ſalt, ſuch as the Sun operateth. For it is either digged out of the Earth, being generated of the Urine of Men and Beaſts, and elicited by water, and by decoction ſhooteth into Chriſtals, and ſeparateth from other Salts; or it is taken from the Mortar of old walls made with Lime, or it is taken out of Mountains and Limy or Chalky Hills, by the help of water; or it is made by Art of common Salt, Wood, or Lime-ſtones. But which way ſoever it cometh, it is of one and the ſame nature, and burneth with a flame, as my Treatiſe of *the Proſperity of* Germany, deſcribeth more at large. Salts extracted from the Aſhes of burnt wood, do again poſſeſs another nature and other Properties, and are called by the Name of Alkalies. Alſo there is another Salt prepared from Urine, common ſalt, Soot, and Bulls blood, known by the Name of Sal Armoniack, and is uſed inſtead of another Sal Armoniack, which was digged up in certain Mountains, and brought to us, which now ceaſeth to come.

Theſe are the moſt noted ſalts, and ſerve for very many uſes, as Sea ſalt, Fountain ſalt, Mountain ſalt, which is alſo called Sal-Gem, which are uſed in the Kitchin for ſeaſoning of food, for the ſalting of Fleſh and Fiſh to preſerve them ſome time from Corruption. The uſe of Vitriol is chiefly in Dye-houſes, for dying Silks and Cloth black, as alſo in Apothecaries ſhops, where it ſerveth for the preparing of Medicines: Concerning theſe things, ſee more in the firſt part of my Furnaces.

Alum is profitable for Dyers, Phyſicians, and other Artificers. Of Salt-petre is made that deviliſh thing call'd Gun-powder. Beſides this it is profitable for the making of many excellent Medicines, and for the Chymical Emendation of Metals, and the inventing and utility of many Mechanical Arts, as appears by the ſecond part of my Chymical Furnaces, and the ſecond part of my *Pharmacopœia Spagyrica*, alſo *Miraculum Mundi*, its Defence, and Continuation, as alſo the four parts of *the Proſperity of* Germany.

Of fixed ſalts, thoſe which Wood Aſhes afford, have their uſe in Medicine and Alchymy, but they are more frequently uſed in Dying of Cloth, and making Soap. Sal Armoniack is uſed in Medicine, Alchymy, and other Arts, but all thoſe ſalts are ſo well known, that

that we ſhall ſuperſede any farther Declaration of them. Thoſe therefore which we have here mentioned, are Salts, which hitherto, by a long Progreſs of time, and continual experience, have made manifeſt their own Virtues and Powers. Among thoſe, the Culinary or Kitchin-ſalt is moſt eminent in nobleneſs, excellency and neceſſity, inaſmuch as it is that from which all the reſt do ariſe, as alſo by the help of Art may be made, as my Writings every where teach; and is the *Baſis* of all other Salts, whether known or unknown; which thing is moſt true, and will alwaies remain to be true: For by a very eaſie buſineſs, by fire and the addition of any metallick ſulphur, it is turned into Alum or Vitriol; by the help of Sulphur, Fire and Air into a burning Salt-petre; and by the help of a certain peculiar ſtrong fire, it paſſeth into an alkaliſate ſalt, and being deprived of its ſharpneſs, becometh very profitable for the dunging and fattening of Fields, and ſandy and barren Land.

Moreover, the common Kitchin-ſalt ſuffereth it ſelf to be purged and cleanſed by its own ſpirit, and by that purgation and cleanſing acquireth a clearer and whiter colour, pleaſanter taſte, and more excellent powers and virtues for the ſeaſoning of Food, and ſalting of Fleſh and Fiſh, for it becomes ſweet, clear, and pellucid like Cryſtal, and ſhooteth into ſquare Cryſtals like Dice, reduced into Figures ſo perfect, that they cannot be more perfectly formed by any Inſtrument.

Hence no man will deny, but that ſuch a cleanſed ſalt is more conducible to health than that which is groſs and impure.

I admire at our ſupine negligence, who are ſo little ſollicitous about our own health. We daily ſee with our eyes, that no man can want the uſe of ſalt, that it is ſubſervient to the health of man, and alſo neceſſary for Cattel. And if when groſs, as it comes from the pans, and as yet loaded with many fæces, it doth much good; without doubt it would do much more, if it were cleanſed and prepared by an artificial preparation. It is the intereſt of great men (if not of others) who have the government of many Subjects, to preſerve a firm health of Body, and to cauſe ſuch ſalt to be prepared for the uſe of their Tables. The Coſt required for the doing this is ſmall, by which the ſalt is made ſo ſweet, that by its pleaſantneſs it will invite every one to covet it. It doth not provoke thirſt after the manner of common ſalt; inaſmuch as it wanteth thoſe earthy fæces which yet adhere to common ſalt, but quencheth it, allayeth hunger, corroborateth the heart, as alſo the ſtomach, brain, and all the members of the body, admitteth no putrefaction in the body, preſerveth it againſt all Diſeaſes, and excelleth with wonderful Virtues, to which that groſs ſalt is in no wiſe to be compared. Truly it is a great Treaſure and high Gift of God, by which Mankind is ſuſtained, nouriſhed, corroborated, and encreaſed, for which great thanks are to be given to God.

Beſides the commemorated Purgation of ſalt, inverſion and commutation of common Salt into Alum, Vitriol, Salt-petre, Alkalies, and the like ſalts mentioned in my Writings, there is yet a more ſecret purgation and emendation of the ſame common ſalt, exalting it into a more noble and far more excellent ſtate, concerning which I do not remember that I have read any thing in any Author, except in *Paracelſus*, who maketh mention of it in few words, in the Chapter of the Virtues of common ſalt, ſaying, The Virtues of Salt conſiſt in its preparation; crude ſalt only doth this, that it preſerveth the goodneſs of Fleſh and Fiſh. But if it ſhall become a *Sal Enixum*, it keepeth all things in their ſtate, ſafe and ſound, for an incredible ſpace of time, it turneth Wood into Stone, as alſo duſt and ſand; the Leaves of Trees remain green in it; whatſoever is beſprinkled with this ſalt, refuſeth all mutation. It preſerveth like a Balſam, and effecteth more, becauſe in proceſs of time it coagulateth all things.

Theſe are the words of that incomparable Phyſician and Philoſopher, concerning his *Sal Enixum*, but what this name ſignifies I know not, but I call it *Sal Mirabile*. He attributeth this to it, that it is able to preſerve all things ſafe and ſound for an incredible ſpace of time: Nor doth he erre from the Truth, for he that can prepare ſuch a ſalt, may not only perform that, but alſo much more.

The manner of preparing it is well known to me, becauſe I have often made it, and found in it things incredible: Whether my preparation agrees with the preparation of *Paracelſus* or not, nevertheleſs all things which *Paracelſus* aſcribeth to his *Sal Enixum*, and far more, I do in no wiſe doubt to attribute to my *Sal Mirabile*; neither is it any matter to me or others, whether I uſe or not uſe the ſame preparation that *Paracelſus* did, provided my ſalt performeth the ſame things which I affirm it can perform. Alſo I would not give the ſame name to my ſalt, which *Paracelſus* did to his, leſt Calumniators and Cavillers ſhould, out of envy and hatred, take occaſion thence of calumniating me, and ſaying, That my ſalt is not the *Sal Enixum* of *Paracelſus*, which hath already happened to me, when I gave the name *Alkaheſt* to my Univerſal *Menſtruum*: For the proud Sophiſters and ignorant haters of me, in their debauched Cups, have taken occaſion to cry out againſt me with loud vociferations, ſaying, *The Alkaheſt of* Glauber *is not the Liquor Alkaheſt of* Paracelſus *and* Helmont; when nevertheleſs mine exceedeth the Liquor of *Paracelſus* and *Helmont* by many degrees. For mine is at hand, and to be ſeen, by help of which I prepare my *Aurum Potabile*, tinging Mercury into pure Gold. That *Liquor* of *Paracelſus* and *Helmont* is plainly inviſible, and can be prepared or procured by none: *A ſmall Bird in the hand is better than many thouſands of great birds that flie in the Air, & can neither be ſeen nor taken.* And this is the reaſon why I would not call my Salt by the ſame name, becauſe I would not afford my haters, the wonderful Brethren of Ignorance, new matter of flouting, ſcoffing, and defaming me; although I well know, that my *Sal Mirabile* doth not in the leaſt come behind the *Sal Enixum* of *Paracelſus* in Virtue, and perhaps alſo much to exceed it; which in the following Narration I have determined to make manifeſt.

As *Paracelſus* delivereth, that his *Sal Enixum* defendeth all things which are put into it from Corruption, for an incredible ſpace of time, and at length, by an admirable Metamorphoſis, tranſmuteth them into ſtone; my *Sal Mirabile* doth not only perform that, but effecteth ten times more.

But before I enter upon the deſcription of the Virtues lying hid in my *Sal Mirabile*, I thing it neceſſary to indicate, That Salts of this ſort do every where occur in the Earth, and being diſſolved by Water, are carried to the ſuperficies, and ſuch Fountains are enumerated by *Gerogius Agricola*, ſhewing in what places they may be found, and that all things put into them are in a ſhort time converted into a ſtony matter; which other Writers alſo teſtifie, and eſpecially *Celſus* in his Book *De rebus metallicis*. Nor is there any reaſon why any man ſhould doubt it, ſeeing that Fountains

tains of this ſort offer themſelves in our *Germany*, although few judge them to be of any moment. There is ſuch a one in a certain place of *Helvetia*, which in a certain ſpace of time converteth all Wood caſt into it wholly into Stone. And the Inhabitants of that place do very often make trial of the thing by Experiments, by cutting ſome Wood, and reducing it to the figure of a Whetſtone, and putting it into the water of the ſaid Fountain, in which, being converted into a ſtone, they afterwards uſe for the whetting of Sythes, and other the like Inſtruments. I my ſelf have ſeen whetſtones of this ſort, and had them in my hands, from the figure of which it ſufficiently appeareth, that they were firſt wood, and have been converted into ſtone by ſo wonderful a Metamorphoſis. The matter is out of all doubt, and there are many Fountains obvious in other places, of the ſame Nature. I have not ſeen that in *Helvetia*, but I have ſeen the Infant of *Baſil* with Dr. *Exius*, who is yet living. To this Infant, in a very large Glaſs, ſtanding upon a low ſettle, the Signior *Exius* had poured a certain peculiar Liquor, which had preſerved it plainly uncorrupted and unhurt, to that time that it was ſhewed to me. And they told me, that the Infant was by the Liquor changed into ſtone; but I, ſeeing I did not touch or handle it, cannot affirm that for certain; but I ſaw it ſitting with a full body, as if it had been but new born, ſince which time it is now above Twenty years, and then it had been Ten or Fifteen years in that Water, in which alſo it yet remains, as I have lately heard. But no man knoweth what water that was which the Signior *Exius* had put to that Infant, whether he took it from a Fountain turning wood into ſtone, or whether he made it by Art. There is a Fountain of the like nature and property in *Auſtria* at *Neapolis Viennenſis*, a fenced City about eight miles diſtant from *Vienna*; I being a young man, long time ſince travelling towards *Vienna*, fell into a burning Feaver, known by the name of *The Hungarian Diſeaſe*, which ſeldom any ſtranger eſcapes, and having ſomewhat recovered my former health, came to the ſaid *Neapolis*, and ſuffering a Relapſe, was conſtrained to ſtay there. And the Diſeaſe had ſo debilitated the Appetite of my ſtomach, that it neither deſir'd nor digeſted any Food. The Inhabitants adviſed me to go to a Well of almoſt an hours Journey from the City, ſituated near a certain Vineyard, and to drink of the Water to recover my loſt Appetite. Following their Counſel, I took a great piece of Bread with me to the Well, nevertheleſs I gave but little credit to their words, who told me, that I would eat all that piece. Coming to the Well, I eat the crumb of the Bread ſopped in the water, and it reliſhed to me very pleaſantly, who before at home loathed the greateſt Dainties. I took up the ſame water with my hollow cruſt of Bread, and drank it, which ſo excited my Appetite to eat, that at length I alſo eat up my Cup, which I had made of my Bread; returning home much better and ſtronger, I declared to the Inhabitants the event, ſucceeding according to my wiſh, who affirmed to me, that if I would continue the uſe of that water, the faculties of my ſtomach would be throughly confirmed. I asked them what kind of water that was? They anſwered. that it was water of Salt-petre, which I believed, being then unskilful in ſuch things, but afterwards I found the contrary: For it could not be the water of Salt-petre, ſeeing that in no wiſe conduceth to the ſtomach, but rather occaſioneth nauſeouſneſs and loathing. It might be, that the water of the ſaid Fountain being evaporated to a Cuticle, might ſhoot into Cryſtals like to Salt-petre, but notwithſtanding was not true Salt-petre, as wanting all burning, and not taking flame, which they might eaſily have found, if putting a little of that ſalt upon a burning Coal, they had tried it after the accuſtomed manner of trying Salt-petre: For now it is certainly evident to me, that that Fountain contained that Salt which *Paracelſus* called *Sal Enixum*, and I *Sal Mirabile*; and alſo that it is the nature of that to ſhoot into long Cryſtals, and yet not to conceive flame. That *Well* is encloſed with wood, in which many water-Mice have their Habitation, which preſently will ſeize and ſwallow any crumbs of Bread caſt into the water. I asked why a *Well* of ſo great moment was encloſed and fenced with wood, and not with ſtone? They anſwered, That could not be done without damage, for the wood being taken away, which had now paſſed into a ſtony nature, it would come to paſs, that the ſand falling into the well, would choak it up. The wood which did not touch the water was now rotten, as I then very accurately obſerved, being a young man of 21 years of age.

Staying in the ſame City the following winter, I found, that the Moors or Marſhes about the ſame, which rendered it ſo ſtrong, were never frozen into Ice by the cold of the winter; which is an Argument that a certain peculiar ſalt is latent in that water; which is the reaſon that the Planks or Piles fixed into the Marſhy ground, upon which many, yea, the greateſt part of the Houſes of that City, do ſtand, or are ſet, in a long progreſs of time, are changed into meer ſtones, and afford a firm Foundation to the Houſes built upon them.

From all thoſe indications I have hitherto conjectured, that all the Springs about that City abound with that ſort of ſalt which *Paracelſus* calleth *Enixum*, ſeeing that in the ſaid Marſhes I have ſeen the Graſs green all winter, which is a certain indication of this kind of ſalt there exiſting. The watery Animals which are in the Fountain and Marſhes near to the City, confirm the conjecture, among which the number of the water-Mice is not ſmall, which cannot live in all waters; and the ſhell-Fiſh, or Tortoiſes, which are every where in an incredible quantity, in the water flowing about the City, and watering the Marſhes and Gardens, although wont to be eſteemed by great men among Delicacies, are here of no account at all; and for that reaſon both the Citizens and Countrymen put two or three of thoſe ſhell-fiſhes into the veſſel in which they ſave the waſhings of their Diſhes, to give to their ſwine, ſaying, that this ſort of Animals abiding in their waſh, conduceth much to the fattening them. And from theſe things it appeareth, that water-Mice and Shell-Fiſh of this ſort, do delight in ſweet waters, tempered with a certain ſalt. Any man that hath a mind to take the ſaid Shell-Fiſh, or Tortoiſe, goeth into the Meadows or Paſtures in a morning, which are watered with this kind of water, where they wander about in the wet Graſs, ſeeking their Food; and alſo in the evening after ſun ſet, when they return again to to feed. If they perceive any body in their way, they preſently betake themſelves to the water, and in their entrance into the water, they retract their four feet, which with their head and tail (like to the heads and tails of Serpents) they hide and ſecure in their ſhell, which is ſo hard, that it can ſcarcely be broken with a ſtrong and heavy Hammer. The Inhabitants, when they will boil them, prick them with ſome ſharp Inſtrument, at the feeling of which, they again put their head and tail out of the ſhell, which they preſently

ſently cut off with a knife. The body being boiled in water, the ſhell openeth of its own accord, out of which the Fiſh being taken, is purged, and prepared with Butter, Wine, and Spice, and is not much differing from Veal, nor of an ingrateful taſte, and therefore reckoned amongſt delicate Foods, by thoſe who are given to feed daintily. Truly, I am perſwaded, that Animals of this ſort are not to be uſed as Food, but are rather profitable to the health of Mankind, becauſe they abide in pure waters.

Theſe few things my Experience hath adminiſtred to me concerning theſe Waters, by which Wood is changed into Stone, yea, not Wood only, but alſo the skin and bones of Animals. I have alſo ſeen half a Loaf of Bread turned into a Stone; whence any man may conjecture, how great a fixing power is latent in the ſaid ſalt, concerning which there is yet more to be ſaid.

This Tranſmutation of Wood into Stone will put all the Brethren of Ignorance to the bluſh, who with their ridiculous Mockeries laugh at and deny the wonders of Nature of this kind, that by the operation of Art emulating Nature, a Body ſhould be ſpoiled of its fugacity, and be tranſmuted into a conſtant and incombuſtible body. All Wood being burnt by the fire, is conſumed, leaving nothing behind it except a few ſalt aſhes, which nevertheleſs being tranſmuted into a ſtone by a fixing water of this kind, retaineth its priſtine body, and cannot be conſumed by any fire. This is an infallible Argument, moſt clearly refelling thoſe Aſs-like Deriders of Art. Can theſe Belweathers be more clearly refuted by any other Argument or Teſtimony? I ſpeak theſe things, to the end that they may be brought to a more eaſie belief, and not to be amazed with ſo great admiration, when they ſhall in the following Treatiſe hear me affirm, That any ſubtile Spirit of Wine, by the help of this kind of Water, may be changed into a fixed Salt, conſtant in the Fire.

Seeing therefore it may come to paſs, that by ſuch a Tranſmutation any fugacious Spirit of Wine may paſs into a fixed and conſtant Salt, Who will deny, but that the ſame conſtancy may be afforded to fugacious Metals, by a water of this kind? But by what means ſuch an operation, which ſeems impoſſible to every man, may be effected, may be worth the while to indicate in few words, ſeeing that it happened to me caſually, not ſeeking it, and which I my ſelf at that time ſhould not have believed, although any one had ſeriouſly affirmed it to me.

The *Sal Enixum* of *Paracelſus*, or my fixed Salt, which diſſolveth all things, is endowed with that virtue and efficacy, that it diſſolveth all things by Fire; at a certain time I had diſſolved Gold with it by the dry way, and would make trial whether Spirit of Wine would take a Tincture from it or not: The diſſolution being made, I would have poured upon it a burning Spirit of Wine, but by chance I poured upon it in the Glaſs Spirit of Juniper; afterwards perceiving my errour, I ſet the Glaſs aſide, and half a year after, I found the Spirit tinged with a bloody colour, which I filtred through a brown Paper, and put the clear Tincture into a Glaſs, to ſeparate the Spirit from it by the Fire. But ſeeing that I obtained not a Spirit, but an inſipid Phlegm by evaporation, I found that that Red Salt, in a long proceſs of time, had rendered the Spirit fixed, and by a wonderful change had coagulated it into a fixed Salt. The ſame Salt afforded me another Experiment, and indeed yet worthy of greater admiration: A certain Friend gave me a glaſs of Oil of Citrons, prepared from mouldy or decaying Oranges and Citrons, by deſtillation, which Oil ſmelt muſtily, to take away which ill ſmell, I would have poured upon it Spirit of Salt, but by chance put to it my *Sal Enixum* diſſolved, and deſtilled it by fire, which indeed rendered me a clear Oil, but in ſmall quantity, and ſcarce the one half; Therefore continuing a ſtronger fire, when nothing more would deſtil, I let the fire out, the Glaſs being cold, and taken out of the ſand, I found all the reſidue of the matter turned into a black Coal, and when I had taken it out of the Glaſs, I put it upon a burning Coal, to ſee whether or no any Oil yet remained; but the matter being conſumed by the Fire, left many Aſhes, and diſcovered the fixing nature of my Salt. And ſearching more accurately into the operation, I found many wonderful things, which afterwards gave me occaſion to call that Salt by the Name of *Sal Mirabile*. Let others ſearch into the matter, by more exact Meditations, that they may be able to penetrate into it with a deeper ſight. He that cannot ſee the virtues of this Salt, is deſtitute of Eagles eyes, beholding the Rays of the Sun with an unmoved aſpect, and hath the eyes of an Owl, which can ſee ſomewhat in the dark, but is blind at Noon-day. Truly, it is a thing to be admired, that an Oil ſo combuſtible, in the ſpace of a few hours, ſhould be reduced to that ſtate, that it ſhould glow and burn in the fire like a Coal. Therefore let it not ſeem ſtrange to any man, that any Wood abounding with much combuſtible Oil, ſhould in a long progreſs of time, by the help of this Salt, be tranſmuted into a Stone. The knowledge of theſe things happened to me by chance; But who doubteth, but that the ſtudious of Art may, by a ſedulous and accurate ſearch, find out many more? Theſe are enough to the wiſe.

Now followeth the Praxis, demonſtrating the Theory, by what means this Salt is to be prepared, and to what uſes it is to be adhibited, and what wonderful and incredible things may be performed by *its* help, as well in Alchymy as in Medicine.

I. *Of the Preparation of* Sal Mirabilis.

THis my *Sal Mirabile* is prepared and ſeparated from all vulgar Salts, by the help of Art, nevertheleſs more eaſily from one than from another: For it may be elicited not only from the Salt of the Kitchin, but alſo from other ſalts, as Salt-petre, Vitriol, and Alum: Alum and Vitriol abound with many ſulphureous and mineral qualities, and therefore occaſion much difficulty and labour in their ſeparation; and Salt-petre poſſeſſeth a fugacious and burning nature. Therefore ſetting thoſe Salts aſide, we prepare our *Sal Mirabile* of that common ſalt which is uſed in Kitchins, ſeparating from it, by the help of Fire and Water, whatſoever is earthy and terrene; and the ſame being prepared, as much as in us lies, we uſe it to the Honour of God, and the profit of our Neighbor.

Of the external Figure, Colour, Taſte, and Smell of Sal Mirabilis.

THis *Sal Mirabilis* being rightly prepared, looketh like Water congealed or frozen into Ice; it appeareth like the Cryſtals of Salt-petre, which ſhoot into a long Figure; alſo it is clear and tranſparent, and being put to the Tongue, melts like Ice. It taſteth neither ſharp, nor very ſalt, but leaveth a little aſtrin-

gency upon the Tongue. Being put upon burning Coals, it doth not leap and crackle after the manner of common ſalt, neither conceiveth flame like Saltpetre, nor being red hot, ſends forth any ſmell; which gifts or endowments no other ſalt poſſeſſeth.

II. *Of the External and Internal Uſe of my* Sal Mirabilis.

IN the firſt place it is to be known, that my *Sal Mirabilis* containeth many great and hidden Virtues, inaſmuch as it is not ſo ſharp and acute as other ſalts, and therefore its internal as well as external uſe, is eaſily admitted in Medicine. Externally adhibited, it cleanſeth all freſh wounds, and open Ulcers, and healeth them; neither doth it corrode or excite pain, as other ſalts are wont to do. Within the body it exerciſeth admirable Virtues, eſpecially being aſſociated with ſuch things whoſe Virtues it encreaſeth, and which it conducteth to thoſe places to which it is neceſſary they ſhould arrive: For Salt is the Conducter and Rector both of good and evil Powers or Virtues, and carrieth them along with it ſelf, according as they ſhall be joined with it. As the nouriſhment of Vegetables and Minerals conſiſteth only in Salt, ſo alſo the nouriſhment of Animals dependeth upon the ſame. For if the Herbs, Bread, Fleſh, and all other things which we eat, ſhould be deſtitute of ſalt, they could in no wiſe ſuſtain, nouriſh, and encreaſe the Bodies of Animals, for by ſuch it would forthwith come to paſs, that they ſhould conſume and die: Therefore Food alſo nouriſheth, as it is well and in due manner ſeaſoned with ſalt; for a thing that hath no reliſh, is unfit for nouriſhment, according to the common Proverb, *Quod ſapit, nutrit*; *And that which hath no taſte, doth alſo not nouriſh.* Therefore the Omnipotent GOD hath given ſalt to all His Creatures, by which they are nouriſhed and ſuſtained; ſo that there would have been no need of ſalting of Foods with ſalt, appointed for the uſe of Man, had not Sin and the Curſe debilitated and corrupted all things, ſeeing that they were endowed with their own ſalt by Nature: Therefore for the ſuccouring of Nature, thoſe things which contain little ſalt, are to be ſalted with common and vulgar Salt, which is appointed by God for this end, that it might afford nouriſhment to the humane Body, corroborate and ſtrengthen it, as we ſee that Bread, Fleſh, and all Herbs or Sallets, may be indeed eaten without ſalt, but not to afford ſo much nouriſhment: For it is commonly known, that Fleſh, Fiſh, and Sallets being ſalted, do far better ſatisfie and nouriſh, than if thoſe Foods ſhould be received into the ſtomach wholly deſtitute of ſalt. For this reaſon men that undergo hard labours eat Fleſh, Fiſh, Herbs, and other Foods, plentifully ſeaſoned with ſalt, whereby their Bodies are preſerved in their due ſtrength; but thoſe who are not exerciſed with ſuch labours, feed upon Foods not ſo ſalt, but of a more eaſie digeſtion. Salt therefore is the only nutriment not only of Vegetables and Animals, but alſo of Minerals; yea, it univerſally nouriſheth and encreaſeth whatſoever exiſteth in the World.

Seeing therefore that without ſalt nothing can exiſt or live, and that the life of all things conſiſteth in ſalt alone, as is witneſſed by daily experience; Wherefore do Fools think Salt to be a thing of ſo ſmall moment? I anſwer, That this happens becauſe very few know what Salt is, what Powers and Virtues it exerteth, and what is reconded in its inward Penetrals: As is ſaid a little before, I compare ſalt to a Carrier, becauſe he carrieth or conveyeth all thoſe things which are put to him, whether good or evil, thither to where they are to be conveyed, without any labour or trouble, but committing the care to him, who taketh all the burden.

In like manner, Salt being mixed with good things, which adminiſter a good nouriſhment, aſſiſteth the nutritive faculty, and is the conveyer, helper, and ſtrengthener of the adjoined nutriment: Being mixed with venomous and hurtful things, it encreaſeth and confirmeth the Venom with great detriment to the Body, inſinuating it into the Paſſages and Members, into which, without ſalt, the Venom could not have penetrated; therefore with the good it is good, and with the evil it is evil, and being addicted to neither part, is ſubſervient to both, according to the will of the Artiſt, making good the vulgar Proverb, *Salt and Wine quicken the wit*: That is, when mixed with good things, they be moderately uſed. So alſo the contrary is true, if it be ſaid, that *Salt and Wine deprave the Wit*; which I could demonſtrate by many Examples, which for brevity ſake are here omitted. Nevertheleſs, that I may be the better underſtood, I will inſtance in two things: As I ſaid but now, if Salt be mixed with good ſubjects, containing a good nouriſhment, ſuch are Bread, Fleſh, and Herbs, the ſame are rendered fitter for nouriſhment, if daily experience may be credited, which no man will deny. Why therefore ſhould not the contrary be likely, that it ſhould render an evil thing yet worſe, and corrupt it more, if it be aſſociated with it. As for example. Common *Argent-vive* is eſteemed Poiſon, and indeed truly, and is rendered obnoxious to a greater or leſſer poiſonous quality, according as it ſhall undergo this or that Preparation. If one ſwallow half an ounce of it, it operateth nothing in the Body, and paſſeth away without hurt; but being ſublimed with ſalts, and exalted in its venomous quality, being exhibited in the weight but of two, three, or four grains, is ſufficient to kill a man.

In the ſame manner Orpiment, as digged out of the Mountains, performeth nothing of good in an humane Body, exciting frequent and intolerable vomitings and ſtools, if given in too great quantity; nevertheleſs one, two, three, or four grains of the ſame may be taken without any danger, cauſing eaſie vomits and ſtools; but being exalted by ſublimation with common ſalt, becometh ſo hurtful a Poiſon, that being drank, it forthwith killeth Men and Beaſts. So alſo it is with white Arſenick, which being ſublimed with Salt, obtaineth ſuch a poiſonous nature, as is commonly known, although the cauſe of that evil be known to few, as the ſaid Examples do ſufficiently declare. I will yet add one thing over and above, for the ſake of the Ignorant: They who have been verſed in the Labours of the Fire, know thoſe things, and want not my teaching, although their number be very ſmall, but of the Ignorant and Unskilful it is large enough. Arſenick and Cobolt are indeed moſt vehement Poiſons, but nevertheleſs are not hurtful to the Body, if they be taken in their corporal form; but being exaſperated by ſublimation with Salts, and reduced into a more fugacious nature, arrive to that vehemence, that they are able to kill a man only by their odour. Thoſe who have mixed Arſenick with Vitriol and Salt-petre, for the preparing of graduating Waters, as they call them, have experienced the Truth of this. Such Waters are ſo vehemently poiſonous,

ſonous, that they ſmite the Heart with a trembling of any one that taketh in their odour by the Noſe, and alſo extreamly debilitate the Brain. That vulgar Proverb, which ſaith, That *Salt corroborateth the Heart and quickeneth the Wit*, is true, when wholeſom and healthful things are aſſociated with it; but if things unwholeſom and poiſonous be adjoined with it, it doth the quite contrary, ſuffocating the Heart, and weakening the Brain, both which I my ſelf have found.

Long ago, when I was young, being occupied with Arſenical Waters of this kind, it often happened to me, that thoſe ſtrong ſaline Spirits had almoſt put out my Candle. Again, on the contrary, I have found, when I have mixed corroborating ſubjects with Salt, that it hath encreaſed their ſtrengthening Virtues, and exalted them in a wonderful manner. Therefore it is not without reaſon that *Paracelſus* teacheth, That Gold exerciſeth no power or virtue in the humane Body, but by the Spirit of Salts, which inſinuate the virtues of Gold into the Members, and augmenteth them. Here ſome may ſay, Seeing that other Metals exert their powers in humane Bodies without Salt, Why ſhould not Gold alſo do the ſame, if it hath any virtues? I anſwer, That this is the reaſon of the difference, becauſe the other Metals being reduced into ſmall Particles, by filing, do act in the humane Body, by reaſon of their own Vitriolate Salt, which they retain in melting, more eaſily admitting ſolution in the Stomach, and performing their Operations, by reaſon of that natural acidity, which Operations would be exaſperated by the addition of Salt. But that the imperfect Metals effect nothing of good in the body of Man, is witneſſed by Tin and Copper, in a Veſſel of which, Wine ſtanding all night, and then drank, cauſeth Vomitings and Cholical pains, as alſo Palpitations of the Heart; in exciting of which, Copper exceedeth Tin, which doth not ſo frequently excite Accidents of this kind, eſpecially that which is not adulterated with Biſmuth or Tinglaſs, but is pure and unmixt. Lead being ſwallowed, drieth, and cooleth too vehemently: But the filings of Iron are uſed medicinally, not without great profit, becauſe they kill and expel the Worms in Children; and its *Crocus* is alſo wont to be mixed with aſtringent Medicines with Fruit. Silver being filed and taken, is of no uſe in the humane Body, becauſe it hath in it ſelf no ſalt, with which Iron and Copper are endowed. Nevertheleſs, being prepared with Salt, it obtains an entrance into the Members of the Body, and expelleth all hurtful Humours, and ſtrengtheneth the Brain. But being bitterer than Gall, it is ſo ingrateful to the Palate, that it is more difficult to be taken than Vitriol it ſelf. Gold, the moſt eminent among all the Metals, in purity and nobility in its own nature, poſſeſſeth no Salt, and therefore hath no Operation at all in the Body, whether it be taken in filings, or reduced to a ſubtile powder; for the *acidum* of the Stomach is not of ſo great power, that it can enter and diſſolve Gold, as it diſſolveth Copper and Iron, but diſchargeth it with the Excrements in the ſame form in which it was taken. Hence the Unskilful have been ſo bold, as to exclude Gold from a medicinal uſe, as a thing deſtitute of all Virtue, and altogether of no uſe; an errour truly not Philoſophick, but fooliſh, proceeding from meer unskilfulneſs and ignorance, ſeeing that Experience doth altogether teſtifie the contrary. He that believeth no Virtues to be in Gold, may by an eaſie experiment find the contrary, if he ſhall diſſolve it in Spirit of Salt well cleanſed and rectified, and ſhall drink a little of this Solution mixed with Wine or Beer, or any warm Broth or Gruel, for he ſhall perceive a very ſwift and healthful Operation, caſting out all ſuperfluous fæces, according as they ſhall offend, either by Vomit, Stool, or Sweat, or Urine, without any weakening of the Body, but evidently confirming its ſtrength, as I have ſhewed in my Book entituled, *The Conſolation of Navigators*, in few words, by reaſon of the ſhortneſs of time, which did not allow me to treat of this matter more at large. Nevertheleſs I here aſſert, that a ſolution of Gold of this ſort by Spirit of Salt, is able to perform very much in Medicine, although by reaſon of its ingrateful reliſh, it is not much to be eſteemed: For ſeeing the ſpirit of Salt, with which the Gold is to be diſſolved, ought to be very ſtrong from this corroſive Liquor, without which the Gold cannot be diſſolved; firſt, this incommodity ariſeth, that its uſe is unpleaſant, it blacketh the Lips and edgeth the Teeth; to which may be added, that a great quantity of Liquor is required for this ſolution, and the acidity by degrees bringeth loathing to the ſick, and ſometimes the ſick cannot bear the ſharpneſs. Moreover, if this ſolution be taken in Broth, it hindereth its operation, and wanteth the deſired ſucceſs, of which it is not deſtitute when drank in Wine or Beer. For this reaſon this Medicament, which in it ſelf is very noble, and of great moment, is difficultly admitted into uſe. But becauſe we have ſaid that Gold without Salts is able to operate nothing at all, its whole ſolution conſiſts in ſuch a *menſtruum* which is neither corroſive, nor of an unpleaſant reliſh, nevertheleſs openeth the Gold, and rendereth it apt to become a very wholſom Medicine; which endowments I have found in no other thing but my *Sal Mirabile*, which being void of all corroſion and unpleaſantneſs, is it ſelf an excellent Medicament, and conciliateth a pleaſant ſweetneſs to all things which it diſſolveth: For when it diſſolveth Gold, it doth not ſtain the lips and hands with any colour, like other ſolutions, which are made by *Aqua Regia*, or ſpirit of ſalt; neither alſo doth it aſtringe like other ſolutions, but is of pleaſant uſe, and exerteth its gift by a noble Operation. I have tried many admirable things with this Salt, and at length obtained a ſolution, or rather an extraction of Gold, green as Graſs, and is a very wholeſom and moſt noble Medicament: For he who hath brought Gold to a greeneſs, hath performed much, in praiſe of which, many ancient Philoſophers call it *The Bleſſed Viridity*. But what this greeneſs may effect in Medicine, belongs not to this place, ſeeing that I intend here to treat of nothing but Salt, and to prove it to be the Beginning and End of all things, and that it encreaſeth and exalteth the powers and virtues of all things.

And ſeeing that this is agreeable to Truth it ſelf, and cannot be diſproved by any man, it muſt neceſſarily be granted, that a Salt brought to the higheſt degree of Purity, (as mine is) muſt be far better, and more noble than any groſs and impure Salt. Alſo becauſe it amplifieth and exalteth the virtues of all Vegetables, Animals, and Minerals, and that Gold exceedeth in nobleneſs all other Creatures which are found under the Sun, it is eaſie to conjecture, that if the pureſt and moſt noble part of Salt ſhall be aſſociated with Gold, that alſo a moſt noble Medicine muſt thence ariſe: For Salt and Gold, being the Off-ſpring of the Sun, are (as it were) immortal and incorruptible, and therefore afford help to all mortal and corruptible things, and defend them from putrefaction and corruption.

Never-

Nevertheleſs, I would not have any man perſwade himſelf, that in theſe words I go about to aſſert any Immortality, my purpoſe tendeth not thither, ſeeing that I am not ignorant that there is no Medicine againſt Death. I would only ſignifie this, that from the aſſociation of Salt and Gold, there muſt neceſſarily proceed an excellent Medicament. If Salt carrieth and promoteth the Virtues of other things, wherefore alſo ſhould it not promote and convey the Virtues of Gold? Truly there is found no Herb ſo abject, no Stone ſo vile, nor no Bone ſo contemptible, that doth not poſſeſs its own Virtues: Who then can deny that Gold, as the moſt Noble Creature of God (after the Sun and Salt, of which it is generated) ſhould poſſeſs Gifts and Endowments, to be preferred to thoſe of the more vile Creatures? That nothing of evil can proceed from two excellent ſubjects, to wit, Gold and Salt, every unskilful Ruſtick can underſtand; Wherefore then cannot thoſe proud and idle Scoffers perceive it? I think it to be, becauſe they would not be numbred among rude and ignorant Aſſes, if ſubſcribing to my words, they ſhould confeſs ſuch a Medicine to be *in rerum natura*, and notwithſtanding to be ignorant of its Preparation. But it were better for them not to envy thoſe who have received ſuch Gifts, nor to aſſault the Innocent with ſo many filthy Calumnies and Slanders, but to leave thoſe things to them which exceed their own Capacities.

I now make mention of my Green-Lyon, whoſe wonderful Virtues are to be declared and manifeſted to the whole World; although I well know, that this Green-Lyon will not find fewer enemies than my white or red *Aurum Potabile* hath done: For the Devil can in no wiſe ſuffer, that any thing which is profitable to Mankind ſhould be made manifeſt, therefore he uſeth all his power and arts to hinder the knowledge of the Truth, by caſting ſtumbling-blocks in its way. What various Arts have been excogitated, to bring my *Aurum Potabile* into Contempt, and indeed by ſuch a ſort of men, who might eaſily think that I ſhould not grant one drop of it to ſuch haters of the Truth, although they ſhould petition me for it.

And ſeeing thoſe Pot-Companions could not ask it of me, they have endeavoured to extort it from me, under pretence of the ſick, not that they would ſerve the ſick, but only get an occaſion of contemning it, and of bringing it into an Odium with the Sick, leſt by it they ſhould recover their former Health. Have they not taken counſel together in their Meetings, one offering this, another another thing, ſo that by every way poſſible they might oppugn my *Aurum Potabile?* But this Hatred and Envy, carried on againſt me with great ſtudy, I leave to the Divine Vengeance; and although many watery and obſcure Clouds may endeavour to hide the Sun, and to overſpread his warm and vivifick Beams with darkneſs, nevertheleſs they ſhall effect nothing; for at length being diſperſed into vapours, and vaniſhing in Clouds, they will give place to the Solar Rays. There is nothing able to extinguiſh the Truth, which may indeed be preſt, but never overcome, and is therefore like the Light, never wholly extinguiſhed. The Air is never filled with ſo many dark Clouds, but at length they being diſſipated, the Sun again appears to ſight. By a like reaſon alſo the Truth at length freeth it ſelf from the ſnares of lyes, and cometh forth into the Light: Therefore I may without fear propoſe the Truth, although there be many that can but ill bear my liberty of ſpeech; for GOD is to be obeyed rather than Men and the benefits due to Good men are not to be omitted for the ſake of thoſe which are Evil.

Therefore (in the Name of God) I will go on in declaring the Virtues of my *Sal Mirabile*; becauſe I have ſaid in the precedent diſcourſe, that Salt is the Rector or Diſpoſer of all things, carrying their virtues conjoined with it ſelf, to their due place; therefore it is not fit that evil and venomous things ſhould be adjoined to it, but ſuch as are good only, if any thing of good be expected from it.

But there is no Creature under the Sun more noble, excellent, and pure than Gold, nor which more reſiſteth the deſtruction of all the Elements, which without a true ſolution, as we have ſaid, cannot render the Body of Man partaker of its Virtues, and all corroding ſolutions are found to be unfit to diſſolve it; therefore ſuch a ſolution is required, as may be performed by the help of a *Salt* which is not corroſive; therefore taking ſuch a one in hand, we will ſee what good is to be expected from it.

Of the Uſe of my Sal Mirabilis, *as well in the Solution of Metals, as in the Preparation of Medicines.*

FIrſt, it is to be noted, That not only Metals, but alſo all Stones, and Bones themſelves, refuſing the ſolution of all corroſive Salts, may be radically diſſolved by my *Sal Mirabile*, and moſt things ſo diſſolved, whether they be Metallick, Vegetable, or Mineral, put on a green colour, of ſome of which the greeneſs remaineth, but of others, in proceſs of time, is changed into a yellow or red colour.

Concerning this wonderful mutation and ſolution, I could write a great Volume, if I had not deſigned this Labour for another place, intending here only to deſcribe the ſolution of Gold, becauſe another better cannot be found. I have found the ſolution of the reſt of the Metals which are adhibited, to be unfit either for the preſervation or recovery of Health, as I have admoniſhed a little before; but I have found Salt and Gold to be moſt noble ſubjects, of which an excellent Medicine muſt neceſſarily be prepared: For Salt exalteth the Powers and Virtues of all things to a high degree of perfection, and inſinuateth them into the humane body: This ſeems to me not unlike the volatile and fugacious Spirit of Vegetables, as of Wine and Beer, *&c.* which coming into the Body of Man, addeth ſtrength to the Animal Spirit, that it moveth it ſelf more readily, and with greater alacrity. Indeed every other Meat and Drink, whether it be Bread or Water, communicateth ſome ſtrength to the Body, but not ſo powerfully and efficaciouſly as any generous Wine, whoſe Spirit is very pure, efficacious, and ſubtile; ſo that its too plentiful uſe awakeneth all things that lie hid in a Man, and brings them to light. In the ſame manner Salt encreaſeth and confirmeth all things, & being united with them, maketh manifeſt all their hiden Virtues, which without Salt would remain in darkneſs. Who could have manifeſted to us that great Poiſon which lies hid in Arſenick, if Salts had not revealed it? If any melancholly Perſon (who otherwiſe in his own nature is prone to ſtilneſs, like one dead) ſhall drink any ſpirituous Wine, or ſtrong Drink, his Spirits, that were before dull, and as it were buried in a Dream, will preſently be awakened, and his Tongue ſet at liberty. The ſame doth Salt perform, which addeth an encreaſe to the powers of all things, eſpecially of the Metals, which it rendereth manifeſt and known.

known. And indeed without Salt Poiſons could not have been known, as I have ſaid a little above, concerning Arſenick and *Argent-vive*: If Salt worketh thoſe things in evil ſubjects, by dilating and encreaſing their malignity, Why ſhould it not effect the ſame in good ſubjects, by augmenting their goodneſs? Therefore, becauſe among Animal, Vegetable, and Mineral ſubjects, there are none more noble and eminent than Gold and Salt, which have their original from the Sun, it would be ill done to paſs them by, and to ſeek viler ſubjects, for the making of an excellent Medicine, ſeeing that if we take Wine, Salt, and Gold, there are no other things which afford us ſo excellent Virtues. Therefore acquieſcing in theſe, we will endeavour of them to make a moſt noble Medicament.

The PROCESS.

TAke three or four parts of *Sal Mirabile*, and one part of Gold (rightly fitted or prepared for this Operation) mix them, and put the mixture into a ſtrong Glaſs Retort, well luted, which place in an open fire, encreaſing the fire by degrees, until the Glaſs be red hot, urge the fire, and continue it ſtronger, for an hour, then ceaſe, and let all cool, take out the Retort, and free it from the Lute, that it may not be mixed with the matter contained in the Glaſs, but that may remain pure, which is to be accurately ſeparated from the Glaſs, and together with what is ſublimed into the neck of the Retort, to be put into a clean glaſs; which matter will look of a greeniſh colour: To this matter pour ſome Rain-water, that it may be diſſolved in an eaſie heat, and the Salt, with part of the Gold, may be mixed with the Water. Filter this graſs-green Solution through Paper, and draw off ſome part of the water by deſtillation, that the green Liquor may remain, not corroding nor taſting ſharp, nor yet too urinous, but fit to be drank in all Vehicles. The Gold which the *Sal Enixum* hath not diſſolved, you will find after the ſolution, which you may again uſe for the like Work; but the green Liquor you may preſently uſe, as well in Medicine as in Alchymy, which will afford you many profitable things. He that will draw off all the Phlegm to a green Salt, and then extract that ſalt with an alkalized Spirit of Wine, will obtain a Medicine yet more efficacious: For the Spirit of Wine will not be tinged with a green, but a red colour, and will be very ſweet, rendering the Golden Virtues of the Salt more efficacious, and more commodiouſly and readily inſinuateth them into the Members of the Humane Body.

NB. This is to be noted, That the *Sal Enixum* doth not imbibe the whole maſs of Gold in diſſolving, but only its purer part. Now, if you repeat this Operation upon the ſame pure maſs, as yet once more, you will extract the greateſt purity, and without all doubt obtain a moſt noble Medicament, which no man can refute, although he be a capital Enemy to the Truth. This is the Operation, no leſs compendious than true, of preparing a great Medicine of Gold, Salt, and Wine, meriting the name of an *Aurum Potabile*, whoſe great Powers and Virtues are now to be manifeſted to the neceſſitous Sick.

Of the Powers and Virtues of my Green-Lyon, Vitriol of Sol, *or Wonderful* Golden Salt.

THis green golden Liquor may be ſafely and pleaſantly uſed by all, whether young or old, ſick or in health, without any difference of Perſons, becauſe it containeth nothing which is evil or prejudicial: For a cleanſed Salt and Gold, never inferr any ill, but are alwaies profitable, exerciſing their wholeſom Operations, as well in Vegetables, as Animals and Minerals, as in the following Treatiſe ſhall be clearly demonſtrated.

Firſt, This green liquor, only by its external aſpect, cheereth the Heart, Brain, and all the vital Spirits; ſeeing that of all colours there is none ſuperiour to the Green in pleaſantneſs, of which all men are witneſs, who have overcome the intenſe cold of a ſharp Winter, behold the renewing greenneſs of the Trees half dead, and Herbs extinct, in the Spring time, with great delight and pleaſure, and feel all the Blood in their Body to be renewed and revived.

Secondly, This Golden Liquor being drank, ſtrengtheneth and confirmeth the whole *humidum radicale*, Stomach, Brain, and all the inward parts of the body, beyond all other Medicines which I have hitherto known. Alſo it expelleth Melancholly, and all anxieties of Mind, taketh away Palpitations of the Heart, openeth Obſtructions of the internal Veſſels; it healeth the hurts of the inward parts, as Liver, Lungs, *&c.* and cureth all inward Exulcerations; it cureth Gravel and Stone, whether in the Reins or Bladder; it keepeth the Body ſoluble; expelleth Wind, with the pains of the Cholick; preſerveth the Blood from Corruption; cureth the Leproſie, Scabs, and Fevers of all ſorts; in proceſs of time it taketh away the Gout; to the inſulting Apoplexy and Epilepſie it affordeth preſent Cure; it cleanſeth the Blood infected by the Scurvy, Plague, and other contagious Diſeaſes; it preſerveth and freeth from all internal Ulcers; defendeth the Lungs, Liver, and other parts, and removeth Exulcerations already ariſen, and takes them away radically. It ſo tingeth all the inward parts of a Man with its Balſamick Virtue, that not being eaſily obnoxious to Diſeaſes, they enjoy a ſound and long Life. Outwardly uſed, it healeth all freſh wounds, no leſs than old and open Ulcers, without any Ointments or Plaſters; for in curing Ulcers of this ſort, there is nothing in Animals, Vegetables, or Minerals, which anſwereth to this in Virtue; as alſo inwardly it cureth Ruptures.

This is the nature and property of Gold, that it moſt potently taketh away all filths, and alſo aſtringeth; which two things are neceſſarily required in the Cure of all Ulcers. This Salt, by its own help, commodiouſly doth the ſame, and alſo wonderfully promotes the Virtues of the Gold: The ſaid Liquor very quickly taketh away the Ulcers of the Mouth and Throat, with all their ſcorbutick Infection, which are wont to give way but very ſlowly to other Medicines: And this it doth, although the Tongue, Uvula, and all the Palate ſhould be full of Puſtules. In ſhort, for the taking away all internal and external Ulcers, I think no Medicine preferrable to this Liquor; but all other defects of the Body which it cureth, for brevity's ſake, I will paſs over.

Moreover, this green and golden Liquor hath this nature and property, that beyond all other Medicaments, it conciliateth a wonderful fertility to all things, as its ſignature, the wit, the green colour, and my diverſe infallible Experiments, do truly teſtifie.

Hence the seeds of all Vegetables being macerated in the same Liquor and set in meer naked Sand, they put forth golden Sprouts and Plants, having a smell much stronger and pleasanter, a fairer colour, and greater length than those which grow out of a fat Earth. Therefore this green Liquor holdeth the chief place in rendering Vegetables green and fruitful, and augmenting their growing faculty; so also among all the Medicines, I know it hath no equal in conciliating and preserving fertility in the humane body: For in all the Diseases of Mankind it bringeth great help and comfort, and effecteth more in assisting the fruitfulness both of Male and Female, than can be believed, and is so great an exciter of Venus, that it bringeth great solace not only to Old men, who being baulked by their younger Wives, are forced to lie still, but also to such Women who are barren in their flourishing age, and therefore destitute of Heirs.

I write not dreaming, but am taught by Experience, having seen some men so strengthened by this Medicine, that they have seemed to themselves never to have been weak, the which also some Women have experienced. Nevertheless such Medicaments are not to be administred too frequently to this Sex, seeing that without this sort of help they are wont to be sometimes exagitated by a more salacious Itch than is convenient: Its use is more safe to Old men, inasmuch as it cannot do them the least damage. Nor ought those things which I here deliver, to seem a wonder to any, for they have their certain and undoubted causes of Operation.

Let those two subjects, of which the Green-Lyon is composed, to wit, salt & gold be inspected; they are the best of things, & necessarily required to the generation of all things; for, what herb can be brought forth without seed and salt? not indeed the least: for if the earth or sand wanteth salt, the seed of the Herb can neither have nutriment nor production: Yea, if the seed it self be also sowed in a fat Earth, and yet be destitute of the Rays of the Sun, it can in no wise grow out of the Earth, but will be suffocated and perish; the which thing is not hid to Rusticks, who after they have sowed their seed, do ardently expect the warm Sunshine. Therefore, for a desirable coming up of Vegetables out of the Earth, and their encrease, there is required a fat and salt Earth, as also the warm and fruitful heat of the Sun, with necessary Rain; which also is to be understood of the generation and multiplication of Animals.

NB. In *Aurum Potabile* salt supplies the room of fatness, Gold is the Sun, and the Spirit of Wine performeth the Office of the warm and fruitful Rain; so also no Minerals are procreated, but by the help of the sun, and labour of salt. They exercising their operations upon the Water, generate Minerals, as the Writings of the ancient Philosophers teach.

Some ignorant man may here object and ask, How it can be, that the Sun, by operating in the depth of the Earth, should generate Minerals and Metals of salt? Let him know, that the Sun, by his hot Rays, doth excite the central fire in the profundity of the Earth; which central fire is not unknown to those who are occupied in digging Metals out of the Earth, who sometimes feel so strong a heat, that laying aside their Clothes, they are constrained to labour very leisurely, yea, sometimes wholly to intermit it; as I have taught in *The First Part of my Mineral Work*. Therefore no man of a sound mind will dare to oppose these things, seeing that it is wholly agreeable to Truth, that generation and encrease in all Animals, Vegetables, and Minerals, do arise from the sun and salt, to which water is wont to be an help.

Seeing therefore that my golden Liquor is prepared of such subjects, it can operate no other thing than fertility, and thereby signed by Nature with that beautiful greenness, by which it signifieth its endowment to render all things fruitful: God adorneth nothing with His marks and signs in vain; from which, as from His signatures, the powers and virtues may be more clearly known, than from Books. For the signature with which things are signed by GOD and Nature never erreth; but the Books and Writings compiled by Men very often erre. Wherefore did the ancient Philosophers and Poets worship *Venus*, the Goddess of Love and of Generation, and attribute to her a beautiful green, generated of the spume or foam of the sea? What is the foam or froth which the sea casteth out upon the shore, but salt, which being dried up by the heat of the sun, is reduced to salt? And the Poets, especially *Virgil* and *Ovid*, who were men of great literature, would not have handled such things with so prolix an ambage of words, but that they were willing by their Fabulous writings to reveal that great Philosophick Mystery to the world: Therefore I constantly assert, That this green Liquor is the chief Medicine of all things to grow or be encreased, as its pleasant Viridity and infallible Experience do testifie. The Ocean, the Mother of all fertility, sheweth also its greenness, especially in those places where it is rich in salt, and strongly irradiated by the Beams of the Sun. This is well known among Seamen, who from the change of the water into a greener colour, presently collect, that they are near to hotter Regions, in which the Sun-beams are more strongly projected; for in such places the Sea is so salt, that it shineth like fire: The Urine of those pissing out of a ship, falling into the Sea, sheweth like sparks of fire; there four parts of water are found to contain one part of salt. The Mediterranean Sea is not so full of Salt, as that which is between *Spain* and *France*; and again, in this it self is found not a little difference, seeing that the *Spanish* side exceedeth the *French* in saltness; and the Ocean it self, by how much the nearer it is to the North, by so much it is less salt; for which reason also the salt is weaker, and of less Virtue, being more remote from the beams of the Sun. Therefore the *Danes*, *Sweeds*, and other Nations, inhabiting the Northern parts, although they have plenty of Sea-water, nevertheless they do not make salt of it, but fetch it from *France* or *Spain*; which is a Testimony evident enough, that salt is elaborated in the water by the most ardent Beams of the Sun, and produced for the sake of an universal fertility.

This is indicated by the *German* name of the Sea, *Meer*, which is all one as if we should say *Vermeer*, that is, *Encrease*, *Enlarge*. An Appellation very well agreeing with the thing, because without the Sea nothing would encrease in the Earth, but on the contrary, all things live, and are encreased by it.

Hence the green colour is a manifest Index and Signature of Fruitfulness, which might be demonstrated by infinite examples, which, for the avoiding of prolixity, is not here necessary, seeing that the thing it self is so manifest.

Some profligate Deriders, who love to oppose the Truth, may say, That this green colour doth not proceed from Gold, but from Copper, that so they may draw honest men away from the Truth, because no Gold seemeth to them to be of use in Medicine; with which Cavil they have before now accosted my

Aurum

Aurum Potabile. That I may ſtop their impure mouths and obviate the frivolous Objections of this ſort, I ſay, that I indeed confeſs, Copper among the Metals doth obtain a green colour, if it be diſſolved in *Aqua fortis*, and other corroſive Liquors of that kind: But Gold being diſſolved in the ſame, appeareth in a yellow colour, and not a green, which is known to every body. But who would think me to be ſo ſtupid and rude, to impoſe upon any ſo open a Cheat? Who alſo in any wiſe could hide ſuch a Cheat? For Copper being diſſolved in ſalt waters, would preſently diſcover the Fraud, by its evil nauſeating and Vitriolick taſte, of which but one drop being ſwallowed down, would excite violent Vomitings, and would not be a Medicine, but rather a Poiſon. Moreover, if you put a Knife into ſuch a ſolution, it will be preſently covered over with the Copper, and appear to be Coppery. The contrary plainly happeneth, if any pure Iron be dipped in my Green-Lyon; for it will preſently appear to be gilt with the colour of Gold, and that more fair and eminent than any Ducat, or other piece of golden Mony exhibiteth. If any Iron-Wire be put into it, and there left for a certain time, it will at length be changed into a pure Gold, which is an infallible teſtimony, that that Liquor doth not draw its original from Copper, but from Gold. Again, it may be objected, that a vulgar ſolution of Gold by *Aqua Regia*, alſo tingeth Iron with a golden colour, and adhereth to the ſame; therefore this is no ſtrange thing, foraſmuch as it is common and known to every man. I anſwer, That ſuch a ſolution, not green, but yellow, doth indeed by precipitation adhere to the Iron, and diſſolveth the Iron it ſelf, and reduceth it into a Mud, but doth not penetrate it, and preſerve it in its form, as my green Liquor doth, which therefore is not to be numbred among thoſe corroſive ſolutions; but that which is done by the *Sal Enixum*, is rather to be called an Extraction than a Solution: For my *Sal Mirabile* is of that nature, that it doth not throughly diſſolve any fine Powder, or Calx of Gold, but only extracteth from it whatſoever is moſt pure, and leaveth the reſt like a black Powder. Moreover, that Solution is not corroſive; for if it were, it would corrode and diſſolve the Iron, and not tinge it with the colour, and advance it to the degree of Gold, the Iron remaining whole. By a like reaſon the green Solution of Copper, made with the vulgar corroſive waters, aſſociateth it ſelf with the Iron, in a green colour, corrodeth it, and forſaketh the Copper. But if Copper be diſſolved with my *Sal Mirabile*, that ſolution doth not penetrate Iron, but tranſmuteth the whole in its own form into Copper, yet not preſently, but in a long progreſs of time.

From all theſe things may be ſeen the great difference between the vulgar corroſive ſolutions of Gold, Copper, and other Metals, and mine, void of all corroſion, which is performed by my *Sal Mirabile*, diſſolving the Bodies of the Metals, after a far other manner than thoſe corroſive ſolutions are made. Therefore it is not to be reckoned among vulgar ſolutions, ſeeing that it poſſeſſeth far other Virtues. The vulgar ſolution of Gold, made by *Aqua Regia*, hurteth all things, as a corroſive Poiſon; a little of it being put to any Vegetable ſeed, depriveth it of all its growing faculty, and throughly killeth it. Some drops of it being drank by a Man, would corrode his throat and ſtomach, like Poiſon. A Liquor of this ſort, by its corroſive and gnawing faculty, converteth the Metal put into it into ſlime or mudd. That ſolution which is made by the rectified Spirit of Salt, may ſafely be taken by any, when a ſufficient quantity of Water is mixed with it; but it is not ſweet, it conſtringeth the Tongue, and ſtaineth the Hands; this doth not my green Liquor, for it neither coloureth the Hands, nor aſtringeth the Tongue, nor yet corrodeth the ſeeds of Vegetables, but rather exciteth them to fertility.

Whence it appears, that my ſaid *Sal Mirabile* is not corroſive, but by it ſelf is a good Medicine for all Vegetables, Animals, and Minerals, which Experience it ſelf moſt evidently argueth: Therefore it can work nothing but good, becauſe prepared without any Corroſive, and repreſented to the eye by a wonderful ſignature, to wit, the fair Green colour.

This ſignature is an undoubted token of its extraordinary Virtues, in rendering all living things vegete and fruitful, which lie abſconded in its inward Penetrals. And this I think ſufficient to be ſaid to thoſe fooliſh and idle Cavils of ignorant Scoffers, with which they may inſult over me.

Whatſoever I have here aſcribed to my Green Lyon, my red *Aurum Potabile*, extracted with Spirit of Wine, alſo performeth the ſame, and that as well in Vegetables and Animals, as in Minerals; for the Spirit of Wine can hurt none of them, but rather inſinuateth the virtues of Gold into Vegetables and Animals, and rendereth them more efficacious. But concerning the ſolution of Gold by my *Sal Mirabile*, and its efficacy and operation, this may ſuffice for the preſent.

As for the ſolution of the other Metals, there is no need to make many words, or to write a large Volume about it, ſeeing that from what hath been already ſaid, any man may eaſily conjecture, that ſolutions of this ſort, made by the help of *Sal Mirabile*, are far better than thoſe made by Corroſives. The Vitriol of *Venus* made by its help, doth not hurt Vegetables, as common Vitriol, which killeth the ſame by its corroſion; but the Vitriol made by *Sal Mirabile* wonderfully promoteth the growing faculty in Vegetables, ſo that Lunar, Venereal, Martial, Jovial, and Mercurial Herbs may be produced, which will have wonderful effects, eſpecially if the Vegetative faculties of Lunar Herbs be encreaſed and promoted by the Salt of Luna; of Venereal, by the Salt of Venus, and ſo of the reſt.

Enough hath been ſpoken to the Wiſe, but he that hitherto cannot apprehend what I have ſaid, is an Aſs, and unworthy of ſuch *Arcanums*. From this Foundation a diligent Phyſician may erect a far other method of Curing, and may prepare for himſelf ſuch Medicines, by which he may obtain Honour and Wealth. I have for many years obſerved, that Herbs are wont to acquire Martial faculties and properties, if they grow out of a reddiſh Martial Earth, although they were not before of a Martial nature, but of a Solar, Lunar, Venereal, Jovial, Saturnine, or Mercurial Property.

But how much more would the innate properties and virtues of Herbs be ſtrengthened and encreaſed, if they were not nouriſhed by the Dung of Animals, but ſet in pure ſand and watered with *Sal Mirabile* impregnated with the virtues of Metals, and thence acquire the promotion of their growing faculty. Truly other Herbs of far greater Virtues, and other odours and taſts, would be brought forth, than the common, which are wont to be produced by the Dung of Animals, and the ſimple Salt of the Earth. By this means ſo ſtrong an attractive Power may be conciliated to the Seeds of all Herbs, that by a Magnetick power they may attract to themſelves the Aſtral powers and influences, and ſo encreaſe their

Virtues

Virtues, that without any Preparation they might be able to cure all Diſeaſes to admiration. NB. That it is neceſſary, that he that would exactly underſtand the nature of Herbs, ſhould know how to promote the vegetative faculties of Solar Herbs, with Solar Salt; of Lunar with Lunar, and ſo of the reſt, and not that he ſhould intermix the one with the other, without any conſideration; which without doubt would be a hindrance to the deſired ſucceſs.

Conſider theſe things with an accurate Meditation, as great Secrets and *Arcanums*, which will not be revealed to the perverſe World. A word to the Wiſe is enough; therefore I will add no more; but I make no doubt, but that this Revelation of my *Sal Mirabile*, in proceſs of time, will be accepted by diligent Phyſicians, and bring ſo much benefit, that they will by the ſame effect much good in comforting and curing the Sick. All things have their time, ſo alſo this Arcanum, which in its time will be in vigour; but I would not have any man perſwade himſelf, that he may fiſh out of me the Preparation of my *Sal Mirabile*, I will not *caſt Pearls before ingrateful Swine*, but will reſerve them for Friends. But leſt an occaſion ſhould be given to ignorant Deriders, and thoſe that hate me, of calumniating and ſlandering me, as if I my ſelf were ignorant of preparing of a Salt of this ſort, I have determined to deliver ſome ſmall portions to divers prudent men, not of this Salt only, but alſo of thoſe Salts which are endued with the Virtues of Gold, Silver, and other Metals, that at any time they may be able to exhibit a clear Teſtimony of the Truth: And I will produce thoſe Herbs themſelves, that I may have them in readineſs to ſhew to others.

Therefore let no man trouble me with his Letters, to ask of me this ſalt, or other Medicines, for I will communicate them to none, but ſuch as I know, and with whom I am familiar.

Great Thanks are to be given to Almighty GOD, who hath made this preſent unworthy World partaker of ſuch *Magnalia*. I have ſought, and have opened the way to others; let another alſo ſeek, and enter by the way I have ſhewed, that inſiſting in my footſteps, he may by the eaſier labour, obtain a greater light of Nature.

But that I may omit nothing which pertaineth to the good Inſtitution and Doctrine, and concerneth the glory and honour of Salt, I will yet over and above add one infallible Teſtimony, by which any rude and ignorant man may evidently ſee, that all fertility conſiſteth in Salt only, and that it is the moſt precious Treaſure of the whole World, for the health of the Body, and that in it lie hid moſt ample Riches.

Fertility is indeed already demonſtrated in many foregoing Teſtimonies; but becauſe the Hiſtory of the Prophet *Eliſha* agreeth more than a little with theſe my ſayings, and may be a clear Teſtimony to them, I have thought fit here to adjoin it. We read in 2 *Kings*, 2. 19. that the men of the City ſaid to *Eliſha*, *Behold, it is good to dwell in this City, as my Lord ſeeth; but the water is naught, and the ground about it is barren: Bring hither to me* (ſaith he) *a new Veſſel full of Salt*. Which being brought, he went to the Spring into which he caſt the Salt, ſaying, *Thus ſaith the Lord, I have healed this Water, from henceforth there ſhall no dearth and barrenneſs ariſe thence*. So the Water was healed even to this day, according to the word of *Eliſha* which was ſpoken.

That this great Myſtery may the better be underſtood, it will be neceſſary firſt a little to conſider the Hiſtory it ſelf, from which it may be known by what means the Salt of *Eliſha* became ſo ſtrong, that it expelled Death, and rendered the Water good, and the barren Earth fruitful.

When *Elias* was to be carried up into Heaven, he ſaid to *Eliſha*, Ask of me what I ſhall do for thee, before I am taken from thee. *Eliſha* asked of *Elias*, that he would grant to him a double portion of his Spirit: *Elias* anſwered, *It is a hard thing which thou haſt asked; if thou ſhalt ſee me when I am taken from thee, it ſhall be as thou deſireſt, but if not, thou ſhalt obtain nothing*. And when they went on together talking, behold, there cometh a fiery Chariot with Horſes of Fire, and parted them aſunder; ſo *Elias* was carried to Heaven in a fiery Chariot; and *Eliſha* ſeeing this, cried out, *My Father, my Father, &c.* Liſten therefore, Wherefore did *Elias* ſay to *Eliſha*, *If thou ſhalt ſee me when I ſhall be taken from thee, thou ſhalt have thy deſire, otherwiſe not?* And why with this condition? Could not *Elias* at his own will have rendered *Eliſha* the poſſeſſor of his wiſh? Perhaps very eaſily, but *Elias* would not without ſome *medium*, becauſe *Eliſha* was to be doubly ſeaſoned with the Celeſtial Fire, by which he was ſeparated from *Elias*, for Fire bringeth forth Salt; the Celeſtial Fire bringeth forth a Celeſtial Salt, and the Elementary Fire an Elementary.

In this Hiſtory is ſet before our Eyes the eternal Divine Light, and alſo the natural, although few diſcern either of them, inaſmuch as their hearts are hardened and obſcured by a horrid blindneſs. And both the Old and New Teſtament are full of ſuch Myſteries; ſo that I dare boldly affirm, That all the Treaſures both of Soul and Body may be found in the Holy Scriptures, if we will; and that we have no need to read the Writings of the Heathen Philoſophers. I add this one thing, That it is of God alone to open the Eyes of thoſe who deſire to underſtand Divine and Natural Myſteries; for without divine illumination, all things are dead and buried in darkneſs. This Truth putteth to flight the diabolical Cavils and Slanders of all ſcoffing Mountebanks and Jack-puddings. But which of them will oppoſe this, and ſeek fertility from any other thing than Salt? Truly, I believe no man, except that moſt profligate *Farnner*, with his wretched Followers, who determine, That Salt doth not fatten, but Dung; when nevertheleſs this is to be aſcribed to the former, and not to the later. But thoſe Aſs-like Brethren of Ignorance, being convinced of their filthy Lyes by the moſt evident Truth, will I hope have their impure and ſhameleſs mouths more than ſufficiently ſtopped. I therefore acquieſce in this demonſtration, in which I think I have evidently proved, That the Sun and Salt are the moſt noble Creatures of God, and that Salt is by me rightly and deſervedly called the greateſt Treaſure, and the greateſt Riches of the World; becauſe after an earthly manner of ſpeaking, nothing can be more deſirable for fruitfulneſs. Salt is the Original of all fertility, the Sun is the original of Salt, and God the Creator of all things, of the Sun, to whoſe Name be Honour and Glory for ever, *Amen*.

But although this demonſtration, which doth evidently ſhew, that ſalt is the greateſt Treaſure in the world, be moſt clear, and beyond all doubt; nevertheleſs, I doubt not, but it will not ſatisfie the Covetous, who will ſay, Where is the *Stone of Philoſophers* which we expected from thee, as the greateſt Treaſure of the whole world, that it being known and acquired, we might lead a brave life? But ſtay, my friend, until ſome man ſhall come and render ſordid men partakers of ſo great a Gift: For thinkeſt thou that if I were

its poſſeſſor, that I would deſcribe ſo great a Myſtery, in ſuch clear words as I have deſcribed the fertility of the Earth: Not at all; nor have I the power of doing that, ſeeing that a man cannot give to any thoſe things which are not his own, but God's. Nevertheleſs, that the pious ſearcher after Truth may have ſome manuduction to a Work of ſo great moment, I cannot but hold forth to him that ſmall Light granted me by Divine Grace, provided he hath not Owls eyes, ſhunning the light of Nature, becauſe they cannot bear its ſplendour; which if he hath not, it cannot be, but he will give credit to a manifeſt Truth. And concerning ſo great a work, this is my opinion, That it is altogether poſſible, that the moſt noble univerſal Pearl, to wit, the Medicine and Stone of Philoſophers, reſtoring the diſeaſie Bodies of Men and Metals to their priſtine health and ſtate, may be prepared of common ſalt: But of the Preparation, which is unknown to me, I can affirm nothing certain; but that it may be done, manifold and infallible Experience hath cauſed me to believe; which Experience I keep to my ſelf, and will not part with it to any, although I could very freely, if I might or durſt make pious men partakers of it: But becauſe Faith is effected in us by God alone, it is to be ſought from Him by Prayer, and not to be expected from Men.

Therefore that (according to my promiſe) I may demonſtrate, That the Stone of Philoſophers, lying hid in ſalt, may be got out of it by the benefit of Art, I deſire only this thing of the ſtudious of divine Myſteries, that he would ſearch after thoſe things, in my Writings lately printed, which I have ſpoken concerning the little Fiſh *Echineis*, *viz.* by what means he may be taken with a Net out of the ſalt Sea, for there he will find a ſufficient manuduction, of which it is not neceſſary that I ſhould here ſay any more. Thoſe are the things which I was willing to add in honour of that noble creature ſalt: He that will not believe the moſt noble Pearl, of a univerſal and particular Medicine, to be included in the inward Penetrals of Salt, I cannot help him; it is free for every man to ſeek and walk in another way.

Would it not be too tedious, I could alſo plainly prove, that from marine Bodies, (as Coral, Mother of Pearl, Oyſter-ſhells, and the like things, being diſſolved into water, and precipitated) may be extracted corporal Gold, which I have done with my own hands, and therefore can boldly witneſs it.

But I will ſhut up the Tables, what I have hitherto ſpoken being ſufficient for this time; from which I hope and believe that others will receive benefit: Which I heartily wiſh, together with the divine benediction to all pious men. *Amen.*

A

TREATISE

Of the Signature of

Salts, Metals, and Planets.

OR,

A Fundamental Inſtitution evidently ſhewing by what means not only the Virtues, Signification, Nature, and Properties of *Salts*, *Metals*, and *Planets*, may be eaſily known, but alſo the reaſons of their Names and Appellations, and this not from Books or Writings, but from their naked Signature, to be obtained and known by the help of the Circle and Quadrant.

Written for their ſakes who delight in the Profitable and highly Neceſſary Contemplation of Divine Miracles.

To the well minded READER.

IT is a common ſaying, *Beware of thoſe whom Nature hath marked*; the which is indeed true, if it be underſtood concerning men who are inſignized with ſome preternatural marks, or of the abortions of Nature, but concerning other things it is falſe. For the Almighty God hath ſigned all His Creatures, as well ſmall as great, equally with their own certain ſignatures, and hath as it were ſubjected their depicted Lineaments to the Eyes of men, by which they might know what the nature and property of every thing is, and what Commodity and Profit it may bring to mankind. Hence not only all Vegetables, as

Herbs, Shrubs, and Trees, but alſo Animals, as Beaſts of every kind, yea, and Man himſelf, which abide upon the Earth, the Fiſhes inhabiting the Waters, and the Birds of the Air; but alſo all things moveable and immoveable, he hath ſigned with their peculiar forms and figures, to ſignifie to us by thoſe their ſigns, of what uſe every Herb, every Animal, every Bird, and every Fiſh is, and for what purpoſe it ſerveth. And this is the Divine Inſcription which the Divine Finger hath written upon all things, and by which the nature of all things ſhould have been learned by us.

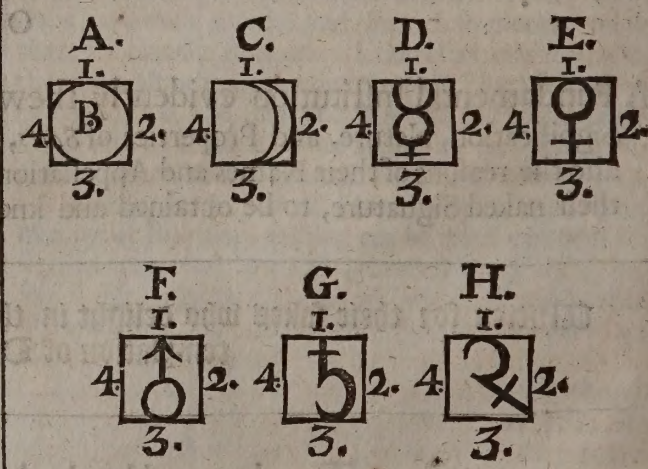
But after that Men began more and more to decline from the humane, to a brutiſh nature, and ceaſed to have the Reaſon of ſo noble a Signature, preferring their brutal Conceptions to the Divine Works, and poſtponing the Signatures incited in all things by Nature; it came to paſs, that in a long proceſs of time that true Signature, or Divine Inſcription, being obſcured, periſhed by degrees, and wholly vaniſhed; ſo that but a very few are found in this Age, who are endowed with any knowledge of ſo great a Science; for the greateſt part of men are wont to follow the duct of Books and Writings, and ſtudy to learn the Virtues and Proprieties of things out of them. Neither could this ſtudy be diſapproved of, if the true, incorrupted, and entire Writings of the ancient and ſingularly-experienced noble Authors remained with us. But becauſe in a long Series of time their frequent deſcriptions, emendations, and interpretations have ſo corrupted them, that ſcarce any thing of truth is to be found in them; it were far better that ſuch mangled and corrupted Writings were not ſo much followed, but that rather that old foundation laid by God himſelf, upon which all thoſe Writings, all Characters, and all Signatures do reſt, and from whence they have received their beginning, ſhould be again brought out of Darkneſs into Light, and the nature and properties of things learned from thence. This would be the true way of coming to the knowledge of Nature, in a ſhort ſpace of time, without ſo many errours, to which, by thoſe falſe Writings, a man cannot come in many years.

Some perhaps may ask, where that ancient Foundation laid by God ought to be ſought, or where it may be found? I anſwer, Every where, inaſmuch as it is before the eyes of every man, but eſpecially ſhewing it ſelf in the Heavens, where the Sun, Moon, and all the Stars are conſtituted by God in a round Figure, ſignifying to us that all Forms and Figures take their beginning from a round Circle, and that a Circle or Rotundity it ſelf, as a moſt perfect thing, pertaineth to the Heavens, and to GOD Himſelf. The Ancients certainly put it in that manner, that by a round Circle they might denote thoſe things which they could neither comprehend by number, pronounce by words, nor conceive by their ingeny; and on the contrary, thoſe things which did not exceed their capacity, ingeny, nor number, they ſigned with a ſquare Figure: So that things celeſtial, and exceeding humane capacity, they have denoted by a Circle, but things viſible, earthly, and ſubject to humane capacity, by a Square, proceeding from a Circle.

And although the ſame ancient Philoſophers, attributing a Circle to God only, were of the opinion, that God could not be more aptly expreſt by any thing than a Circle, having (like Himſelf) neither beginning nor end: Nevertheleſs all thoſe things which after God they eſteemed great, they alſo noted with a Circle, to wit, the Sun in the Firmament, and Gold in the Earth; the firſt of which, ſome of thoſe Philoſophers thought to be God himſelf. Others of thoſe Heathen Philoſophers have feigned for God the Effigies of a Serpent, winding himſelf into a round Circle; and all earthy things of a celeſtial original, they have repreſented by a Square, and ſo they have ſhadowed out the Celeſtial and the Terreſtrial, by the Circle and Quadrant.

Therefore as they obſerved how much of the Celeſtial or Terreſtrial Nature were in the things to be ſigned, ſo much of the Circle or Square they added or ſubſtracted, and according to that they varied their Figures: And not only in the Celeſtial Lights, to wit, the Sun, Moon, and other Planets, but alſo in all earthly Creatures, produced in the Earth by the operations of the Sun, Moon, and the reſt of the Planets and Stars, *viz.* Gold, Silver, Copper, Tin, Iron, Lead, and Argent-vive; they have uſed this manner in ſigning them all with Characters of this ſort, and have noted them with the ſame Characters which they have given to the Celeſtial Lights, producing and effecting the Cauſes of thoſe inferiour Creatures. So the Sun and Gold, as the moſt perfect Creatures of God, are ſigned with a Circle having a point or center in the middle; the Moon and Silver appear in the figure of an half Circle, or of two ſemicircles, at a ſmall diſtance from one another; which ſhew their Bodies not to be abſolutely perfect, but as yet to labour under ſome defect. The Characters of the other Planets, as ♄, ♃, ♂, ♀, and ☿, are alſo the Characters of the reſt of the Metals, *viz.* Lead, Tin, Iron, Copper, and Argent-vive, becauſe they are much more vile and imperfect than Gold and Silver, and are noted with more imperfect Characters; ſuch are an half Circle and half Square, ſignifying that they ſcarce anſwer to the perfection of Silver in the half part, and hardly to the fourth part of that of Gold.

But that I may propoſe the thing more clearly, I think it neceſſary to incloſe the Characters of the Celeſtial Lights, as ☉, ☽, ☿, ♀, ♂, ♃, and ♄, and of the Terreſtrials, as Gold, Silver, Argent-vive, Copper, Iron, Tin, and Lead, which the ancient Aſtronomers and Philoſophers have impoſed upon them, in Squares, conſiſting of the ſame magnitude, that by thoſe it may appear in what degree they differ from each other in perfection.



Here thoſe Characteriſtick Figures of the Signatures are encloſed as it were in little Houſes, which are the Squares: Now, if into one of thoſe I put the Character of the Sun or Gold, *viz.* a round Circle noted with the letter B, it toucheth four parts of the Square, marked 1, 2, 3, 4, and filleth it up, ſignifying that

that among Celeſtial and Terreſtrial Creatures, the Sun and Gold do excell all other things, in their perfection.

The Character of the Moon or Silver, under the letter C, toucheth three ſides of the Square, to wit, the ſuperiour with the top of her Horn, marked 1, the lower ſide marked 3, and the bending of her back toucheth the third ſide, marked 2; but by reaſon of the incurvating concavity of her Superficies, ſhe cannot touch the fourth ſide, marked 4.

The Character of *Mercury*, under the letter D, with both his horns toucheth the upper ſide of the Square, marked with number 1, and with the bottom of the Croſs the lower ſide number 3: the other two ſides, 2 and 4, he leaveth untouched, ſo that the half part of the Square remaineth untouched by *Mercury*. *Luna* toucheth three ſides or the ſame, and *Sol* or Gold is contiguous to all the four ſides.

Venus or Copper, under the letter E, alſo adhereth only to two ſides of the Square, to wit, to the ſuperiour number 1, and to the inferiour, marked with the number 3, but the ſides, 2 and 4, remain untouched.

In like manner alſo *Mars*, or Iron, toucheth only the upper and lower ſides, as you ſee under the letter F. So alſo *Saturn*, or Lead, under G; And *Jupiter* or Tin under H, you ſee touch but two ſides of their Squares. Therefore from this figure may be ſeen in what degree of perfection the Metals exceed one another, ſo that he who hath reſpect to this figure, cannot erre in diſcerning the ſaid degrees.

The Ancients have not impoſed theſe Characters, neither by chance nor in vain, but they have directed the whole reaſon of characteriſing to this end, that the Character might exactly agree with the Nature and Property of the thing ſigned; as the great agreement between the Celeſtial Luminaries or Planets, and the Metals, doth clearly manifeſt. Nevertheleſs theſe things are not to be diſcerned by all men, but by thoſe only who are able throughly to inſpect the nature of Metals, and from that knowledge of the Metals, to know the ſaid degrees of perfection; for ſo much of rotundity as exhibits it ſelf in the Character to the ſight, ſo much alſo of purity and perfection is in the ſigned body; and ſo much as it ſhews of the ſquare, ſo much alſo it hath of imperfection: And this is a Chymical Axiom or Precept altogether infallible, and ſo certain, that he who in the emendation of Metals ſhall follow it, will not eaſily erre.

Gold, the moſt perfect of the Metals, by touching the four ſides of the ſquare, argueth its great perfection: Silver is not far from the perfection of Gold. And among the reſt of the Metals, Argent-vive, Iron, and Copper have the half, but Lead and Tin only the fourth degree of perfection.

Theſe few things we think ſufficient for thoſe who are deſirous of ſo great knowledge. He that deſires to know more of theſe Harmonical Signatures, of the Celeſtial Lights, and Terreſtrial Bodies, let him accurately examin this Foundation, and he will find thoſe things which neither *Ariſtotle* long ago, nor our Schools at this day, have had any knowledge of. This I dare aſſert for truth, That the Ancients, in the *Egyptian* Schools, have hidden great Myſteries under the Characters of their Signatures, and not only in thoſe ſigns impoſed upon the Sun, Moon, Stars, and Metallick Bodies, but that they have manifeſted great Secrets by the very Names which they have given to all things, which was not by chance that they have given to this thing ſuch a Name, and to that another: But when after times changed many Names, thence it happened, that thoſe Signatures fell into great uncertainty, and are now perplexed with many doubts. The Names which from *Adam*, *Noah*, and their Poſterity, were in uſe with the *Egyptians*, *Chaldeans*, and *Hebrews*, the *Greeks* alſo had in uſe, and from the ſame Foundation called things by due and true appellations. The *Latins* have taken no care about thoſe derived to them, although the only and true Foundation of every Inveſtigation of thoſe Secrets is placed in thoſe. Indeed I being ignorant of the *Egyptian*, *Chaldean*, and *Hebrew* Tongues, know not how to interpret thoſe Names with their ſignature. But one that is skilful in thoſe Languages, and endowed with ſome knowledge of natural light, by applying himſelf to ſuch ſearches, by a prudent inquiſition, will find the Truth of thoſe things which I have here written, to wit, That the Nature and Property of all things are poſited in their Names and Characters: I will expedite the matter by a clearer Explication, and in a few words expound the Circle and Quadrate. In my Treatiſe of the *Nature of Salts*, I have clearly taught and demonſtrated, that all things in the World have their original from the Sun and Salt. The Ancients have deſigned the Sun by a Circle, and Salt by a Square: But as a Circle is firſt drawn before that a Square can be put to it; and as a Circle by right is preferred before a Square, inaſmuch as that is the Original of this; ſo alſo the ſun is to be preferred to ſalt, to which it hath given Riſe, and which it hath preceded in its exiſtency, and which being compared with the ſun its Original, is leſs to be eſteemed: Hence, without the ſun, ſalt generateth and produceth nothing; nor yet the ſun without ſalt, becauſe in every generation and production there is neceſſarily required the conjunction of Male and Female, the ſun performing the office of the male, and the Moon of the female.

So *Eve* the Female, as a Square, aroſe from *Adam*, as from a Circle, and from both, to wit, from the circle and the ſquare conjoined, the fertility and propagation of mankind hath drawn its original. The Poets have attributed this propagation to *Venus*, and noted it with a ſign compoſed of a Circle and a ſquare, ſaying, that the Goddeſs *Venus* was born of the froth or foam of the Sea and Salt, and dried up by the Rays of the ſun.

The Character of *Venus* being weighed with an accurate conſideration of mind, very perſpicuouſly ſheweth how wiſely and prudently the Ancients have ſhadowed out the Myſteries of Nature by their Characters.

Venus is ſigned with a round Circle, with a Croſs pendant from the Circle; the Circle denoteth the Sun; the Croſs, Salt: For when four lines are conjoined in their extremities, they make a Croſs, all the ends meeting in one point. But if all thoſe Lines be diſpoſed four ſquare, they form a Quadrate. Therefore in things ſigned, the Croſs and the Square differ only in their external Figure, and ſignifie one and the ſame thing.

That this Myſtery may be the better apprehended, I will interpret the true ſignature of thoſe principal Creatures of God, (to wit, the Sun and Salt, from which all things proceed) attributed to them by the Ancients, according to their Latin ſignifications *Sol* and *Sal*, that their degrees and difference in nobility and goodneſs may evidently appear: For the more Circles there are conſpicuous in thoſe words, the more of purity and goodneſs they argue to be in the things which they denote; and the more ſquares there are in a Word, the more of earthineſs, imperfection, and im-

impurity is ſhewn to be in the thing thereby ſignified. But this Rule holds only in thoſe words which were impoſed upon things by the Ancients, in others not.

Seeing therefore that it is beyond all doubt, that thoſe two words, *Sol* and *Sal*, were by the Ancients impoſed upon the things they ſignifie, according to a true ſignature; we will therefore further explain them.

And here it is firſt to be noted, that all the forms and figures of Vegetables, *viz.* of Trees, Herbs, and other things growing out of the Earth, and alſo of Animals, whether Men or Beaſts, alſo of Minerals, do take their original only from the circle and ſquare, ſo that by thoſe it may be known what bodies or members are round or long; for the Body of a Man, as alſo the Trunk of a Tree, have not only a round, but alſo an oblong figure, and the joints of every finger, and the leaves and branches of Herbs and Trees ſhew forth the ſame figure, ſo that in thoſe the Circle and the Quadrate are every where found.

And not only all the Creatures of God are noted with the ſame ſignature, but alſo all Writings and Letters, proceeding from *Adam*, *Noah*, and their Poſterity, have taken their beginning from the Circle and Square. As for example: All the Latin Letters, even from the beginning to the end, you ſhall find to be compoſed of a circle and a ſquare. *A* containeth two lines and a half of a ſquare; *B* conſiſteth of two ſemicircles, and one line of a ſquare; *C* is a ſemicircle; *D* is formed of a ſemicircle, and one line of a ſquare; *E* hath three lines and a half of a ſquare; *F* two and a half of the ſame; *G* conſiſteth of a ſemicircle, and half a line of a ſquare; and ſo on to the laſt Letter of the Alphabet: So that all the Letters being compoſed of a circle and a ſquare, were left by the Ancients to ſhadow out and ſignifie thoſe Myſteries to Poſterity.

Therefore ſeeing that in my Treatiſe of *the nature of Salts* I have evidently demonſtrated the Sun and Salt to be the beginning of all things, I think it neceſſary to interpret thoſe two words, *Sol* and *Sal*, according to their nature, and to prove that they are the true beginning, and true end of all things.

Between the words *Sal* and *Sol* there is no other difference, but the middle letter, which in *Sal* is *Alpha*, but in *Sol Omega*; by which two Chriſt manifeſted himſelf to St. *John*: But the initial and final letters of both words are the ſame, they are diſtinguiſhed only by the middle letters, *Alpha* and *Omega*, and that not without great reaſon; for as *Sol* generateth *Sal* from the beginning, and all things which are take their original from him, ſo alſo the end of all things ſhall happen at the laſt day, when all things born and ariſen from the Sun and Salt, ſhall again be conſumed by fire, as *Peter* writeth, to wit, that the Sun, Moon, and all the Stars, ſhall fall from Heaven, and that the whole Earth ſhall be reduced to Aſhes. Therefore in *Sol* and *Sal*, the beginning and end of all things are perfectly diſcerned. Neither do theſe two words only ſet before our eyes the beginning and end of all things, with the deſtruction of this earthy and fading World, but they alſo make manifeſt the whole Myſtery of the Holy Trinity, which I could very eaſily demonſtrate.

But becauſe the *Egyptian* Learning, built upon the foundation of Nature, is loſt, and in the room thereof Sophiſtical Schools have grown up, which by their vain loquacity have altogether oppreſſed and baniſhed the truth; it might eaſily happen, that I might bring a Neſt of Hornets about my Ears, if I ſhould write ſuch things publickly, as fly the knowledge of the learned multitude. Therefore it is better to be ſilent, than to incumber my ſelf with unneceſſary contentions.

But that we may ſee there have alſo been others, who were not ignorant of the Myſteries hidden in ſalt, it ſeems fit to me, in the end of this Diſcourſe, to ſubjoin the opinion of a certain learned man, explaining the Greek word ἅλς, *Chap.* 13. *Book* 4. and as it were, bringing into view the great Myſtery of God hidden in the ſame, that ſo we may be invited to read the learned Book of the ſaid Author, concerning ſalt, which containeth many things highly worthy to be read, and of the reading of which no man will repent; the name of the Author is *Bernardus Gomeſius*, printed at *Frankford*, in the year 1605, a Book truly worthy of any man's reading, and as ſuch I ſtudiouſly recommend it to thoſe who are deſirous of learning any thing of good.

But to return to my purpoſe, I ſeriouſly affirm, that the nature and property of Metals may be learned and openly known, not only from the ſignature aſſigned them by the Ancients, but alſo from that which the fire introduceth into them, and this ſignature proceeding from the fire, is far to be preferred to that of the Philoſophers; not therefore becauſe the Element of Fire poſſeſſeth a greater authority or might than all Philoſophers ever had or can have: But becauſe the Fire alwaies performeth immutable actions, and committeth no errours, nor can it commit any, provided the Operator who handleth the fire doth not deviate from the manner of operating, for at all times in one and the ſame manner it ſheweth the ſignatures of the metals.

The nature of the fire is ſuch, that whenſoever we will, it exhibiteth to us, by a ſingular ſignature, the occult nature and hidden properties of the metals; for even as any burning ſpirit of Vegetables, or volatile ſalt of Wine, being drank by men, ſtirreth up their nature and properties, and expoſeth thoſe things to view, which before lay dorment, and which would not have been known, if the warm ſpirit of the wine had not manifeſted them: So alſo is it with Salt, which, as we have taught in the precedent Treatiſe of the nature of ſalts, hath a power and faculty of exciting the nature of metals, and of manifeſting their medicinal Virtues. But the Fire, of which we here treat, hath the faculty of ſubjecting their perfection to our eyes.

For as by the pure ſpirit of Wine the vital ſpirit of a Man is preſently cheered, and being awakened, the hidden ſignature forthwith goeth out of the inward Penetrals of the heart; ſo that the Sanguine ſing, dance, play, and are occupied in Amours; the Cholerick break forth into quarrels and fighting; the Phlegmatick grow drowſie and ſleepy, and the Melancholy are taken up with ſpeculations, meditations, and ſearches. Theſe ſignatures the ſpirit of Wine can draw forth from the moſt inward receſſes of men. By the ſame reaſon the ſignature of Metals is awakened, excited, and educed by the operation of the fire, *viz.* when they are melted in a Crucible; for the ſmoak or fume going out from them, preſently indicateth the nature and property of every of them. Pure Gold, and free from all addition, emitteth no fume alone, but being melted with ſalt, giveth a purple exhalation. Silver alwaies exhaleth ſomewhat of a blue, bitter, and unpleaſant fume: The fume of Copper is green, and ſtinketh: Of Iron not ſo much as Copper, being alſo red, ſtriketh the Noſtrils with a ſtink: Lead and Tin ſend forth a white fume, ſtinking and poiſonous: Argent-vive, in its whole ſubſtance,

ſtance, vaniſheth in a venomous fume, and theſe are the ſigns of the fumes, by which melted Metals, when they are not mixed, are wont to be diſtinguiſhed and known from one another. But if Copper, or any other imperfect Metal, ſhall be mixed with Gold or Silver, it changeth the fume, and rendereth the proof or examen doubtful and uncertain: Nevertheleſs of the judging of the perfection of Metals by the Fire, this Experiment is of all the moſt perfect and certain, *viz.* when they are ſo melted by a very ſtrong fire, that they move themſelves, and are as it were turned or whirled about in the Crucible, and by how much the rounder this motion ſhall be, and the higher it elevateth it ſelf, by ſo much it ſheweth the Metals to be more perfect; the more depreſſed and equal, and the plainer the ſuperficies ſhall be, the leſſer of perfection is in that melted Metal. The trial of this thing is eaſily made, by which it is found, that among all the Metals Gold is chiefly moved on the Teſt, or in a Crucible, by a round or ſpherical motion; next Silver; next to that Copper; next to Copper Iron; after Iron Lead; and laſtly, after that Tin.

The ſame difference of perfection and imperfection is ſhewed by the pouring of a melted Metal upon a Porphyry ſtone, or any the like well levigated, and put into a Kettle of Water, ſo that the water may not touch its ſuperficies, which is to receive the melted Metal: This therefore being poured out upon the ſaid Stone, leapeth and divideth it ſelf into many grains, greater or leſſer, more round, or leſs round, according as the Metal ſhall be more or leſs pure. But of all the Metals, there is none more imperfect than Tin, which by effuſion upon ſuch a Stone, very rarely diſperſeth it ſelf into grains, but if the effuſion be dextrouſly made, it dilateth it ſelf in breadth in a very thin form, like to writing Paper, ſo that it may be writ upon (by a ſtile or ſtift) like Paper, and folded and ſealed, and ſent to others, after the manner of other letters: Such letters made of Tin, are hurt by no Water, ſo that they may be of great uſe, where neceſſity requireth ſecreſie in ſending letters.

But that Tin ſpreadeth it ſelf into ſuch broad leaves, and doth not ſeparate into grains, after the manner of Gold and Silver, the reaſon is its imperfection, which its before-mentioned ſignature evidently argueth, containing but little of roundneſs, and taking the greateſt part from the ſquare.

The knowledge of a metallick perfection is alſo acquired from the rotundity of the metallick motion in the Examen of Saturn, or the ſeparation which is made by Lead in a Cupel, where Gold, before all the reſt boileth with a ſpherical roundneſs, and all the lead being ſent away in fume, by the violence of the fire, remaineth on the Cupel or Teſt, in a pure, round, or ſpherical body, eſpecially when there ſhall not be too great a quantity of Gold.

Silver doth not anſwer to Gold in its round body, in which it remaineth, yet it exceedeth Copper in roundneſs, which ſometimes alſo remaineth pure and round, if it be in a ſmall quantity.

Iron and Tin do not admit the Examen of Lead by the Cupel, for indurating the Lead, they deprive it of all flux, ſo that by combuſtion it is reduced into a powder.

Argent-vive is by the Fire wholly driven away into the Air, in which nevertheleſs keeping a perpetual flux, its ſignature of perfection may be judged of in the Cold, which perfection exceedeth that of the other imperfect Metals, and cometh near to gold and ſilver; for being diffuſed into ſmall grains, it exhibiteth in running a round or ſpherical body, imitating melted Gold: So that it is not without reaſon, that the Ancients in its ſignature have uſed the ſigns of ☉, ☽, and a ſquare; being within wholly Gold and Silver, if it be coagulated; the truth of which many Experiments have demonſtrated to me, made by the Waters of gradation, as they are called; Experiments, I ſay, which I have performed in ſmall Inſtruments, for hitherto I could not make them in great ones, and in a large quantity. If any youngman ſhall have a deſire to try the ſame, let him in the firſt place beware that he uſe not corroſive and eating waters, and by this means render the Argent-vive more fugacious.

It behoveth that he ſeek and know true ſulphur, which if it ſhall be red, he ſhall alſo bind it with a red bond; but if white, he ſhall preſerve its colour conſtant, and bind it with a white bond, otherwiſe it is wont to vaniſh in fume.

Theſe few things I could not paſs by, but ſignifie to the ſtudious of the Divine Signature of Metals and Planets. Let every one occupy the powers of his Ingeny in the exerciſe of this Science, that he may become expert in the wonders of things, eſpecially of thoſe which lie hid in the words or names impoſed upon things ſigned by the Ancients, who have found out great Secrets, as well Celeſtial as Terreſtrial, and have comprehended them in thoſe. Some ſuch words of the Ancients I would have interpreted here, but that in ſo doing I ſhould have divulged thoſe things which are not vulgarly known, for which cauſe it is better to paſs them by in ſilence. He that will bend his endeavours to ſo great a Science, may obtain many wonderful things; but of theſe enough; it ſufficeth at the preſent to have laid the Foundation, the reſt I leave to him, who being prompt to the ſtudy of ſeeking, ſhall bring his mind to the acquiring of this knowledge; if he ſhall once get into the right path, he will find out more than he ſeeketh or deſireth. Alſo Mountains, Woods, and Countries, by their ſignatures do not only indicate the Treaſures and Riches, given them by God, but are alſo wont to foretell their own Fates, as their Riſe, Encreaſe, and Deſtruction. It remains, that we briefly examin, and take a ſhort view of the ſignatures of ſalts, with what notes or marks they are ſigned by God, and alſo by what they ſignifie their natures and properties; for without doubt, they have their ſignatures, and eſpecially the common and vulgar Salt, the which, wherefore ſhould it not have its ſignature, ſeeing that it is the original of all other things? There is not found any Herb or Weed ſo vile, any Worm ſo abject, which wanteth its marks given it by God, by which it manifeſteth to us its nature and virtues. I have above indicated the Sun by a Circle, and Salt to be deſigned by a ſquare added to it: and in the Sun and Salt all earthly things as Vegetables, Animals, and Minerals, to have the beginning and end of their generation, propagation, and encreaſe; alſo all things being riſen from the ſun and ſalt, to be ſigned by the Almighty God, with certain ſignatures, from which their nature, powers, virtues, and properties may be known; neither have I only aſſerted, but alſo affirmed, that all the Myſteries of Languages and Words may be ſearched out and known by thoſe ſigns, to wit, the Circle and Quadrate.

Theſe things are ſo certain and true, that they are beyond all confutation, which I will make plain to every one, by one only Argument, not exceeding the Capacity of a ſimple Boy, if the envious Brethren of Ignorance, being lifted up by their great pride, ſhall

refuſe to undertake it. That the Sun is conveniently and appoſitely ſigned with a Circle, no man will deny, becauſe it never ſheweth it ſelf to the ſight in any other figure than a round fiery Sphere, which ſign being attributed to the Sun, by the Ancients, ſo remaineth even to this day.

The Ancients have alſo ſigned Salt with a ſquare, which by the length of time, and the negligence of men, hath vaniſhed, ſo that every one hath ſigned the ſpecies of ſalts according to his pleaſure, one in this, another in another manner; and by this occaſion peculiar Characters are invented by almoſt every Chymiſt, whence one uſeth not that which another doth. But at this day among them, for the moſt part, Salts are ſigned in the following manner. The common Kitchin Salt hath the Character of a Circle, cut by a line tranſverſe: Salt-petre hath a Circle repreſenting the form of an Egg, and cut by a line drawn from the top to the bottom; But who was the Author of thoſe Characters to theſe Salts, I know not, neither is it much matter, whether a man know, or not know it; but without doubt they were men who had never ſeen Salts brought to their higheſt Purity: For vulgar ſalts, as they are every where found, have not their proper figure and form which they ought to have, and which they obtain after their cleanſing: So the vulgar and ſimple ſalt, as it is made from the Sea, or ſalt Fountains, or dug out of the Earth, hath not its true and proper ſignature, neither can it have, by reaſon of its many earthy feculencies; but after all its fæces are removed, and it hath obtained a great purity and cleanneſs, its own true ſignature, to wit, a ſquare then appeareth, and indicateth the ſign which is due to it. I have already demonſtrated this to be true in my Treatiſe of the Nature of Salts, where I have taught by what means every common Kitchin Salt is to be ſo purged, that it ſhall be no longer rough, foul, obſcure, and aſtringent, but clear and tranſparent like Cryſtal, both in ſmall grains, and greater pieces, of a ſweet ſavour, and a ſquare or cubical figure, and which way ſoever it is thrown, alwaies exhibiteth four Angles, like to a ſquare, as if it were formed by Art: Going forth in this moſt pure form, it ſeemeth thus to ſpeak to Mortals: *Here ye ſee my true and natural form, given to me by the Sun my father, in the body of the Water my mother, which the Earth indeed hath covered with a rough and vile Garment, but Art hath again taken it off (praiſed be God) reſtoring to me my priſtine form, to the future advantage of many ſick; therefore as I was created from the beginning, ſo now I appear, without any impediment, to perform thoſe things for which I was appointed by Divine Creation.*

If the Sun in the Firmament could by any accident be ſo defiled and corrupted, that he ſhould loſe his Light, it could in no wiſe be that any thing in the whole World could remain alive for one day. Which thing Experience it ſelf ſheweth us, when the Moon interpoſing between the Sun and our Eyes but for one hour, depriving us of his Rays; in which Caſe the Sun in no wiſe ſuffereth, nor is in any manner corrupted, but only hindred for that little time, from tranſmitting to us his vivifying Rays. Therefore if ſo ſmall an Impediment in the Orb of the Earth can cauſe ſo many Diſeaſes, and other Incommodities to men, why ſhould not alſo the fæces obſcuring Salt, eclipſing its natural form, and rendering it more ignoble, be a detriment and impediment to its Powers and Virtues? Let every man judge, if a groſs and impure Salt can be as commodious to all Men and Beaſts, as that which hath been reſtored to the higheſt purity of its Body.

Seeing therefore that it is the great intereſt of Mankind to enjoy ſuch a pure Salt, I have determined to prepare a quantity of it, according to that manner of purging it, preſcribed in my Treatiſe of the *Nature of Salts*, that I may be able to accommodate many therewith. I have hope, that at length the Eyes of Mortals will be opened, that they may ſee how for a long time they have been ſeduced by blind Leaders, and finding this, will have a greater regard to their own health. Truly there is but a very ſmall Labour and Coſt required for the cleanſing of common Salt, to free it from its earthy fæces, and render it clear, tranſparent, and in the Water of a Cubical Figure, and that without the addition of any foreign thing, only by ſolution, filtration, and coagulation of its own proper ſpirit.

If by theſe Operations you ſhall bring ſalt to its higheſt purity, you may boldly aſſert, that you have acquired ſuch a ſalt as the pure Sun operated in the pure Water at the beginning; when the Sun, ſeated in the height of the Firmament, would very freely perform his Office, yet being hindered by groſs and turbid Clouds, interpoſing between him and the Earth, whereby he cannot render us partakers of his all-warming Rays, we ought not to impute the fault to the ſun, inaſmuch as he is not in fault, but rather to thoſe thick and dark Clouds, which hinder us of his ſplendour and efficacy.

So alſo is it with Salt, which would freely exerciſe the Gift beſtowed upon it by the Almighty Creator, were it not hindred by its terreſtrial fæces; therefore this impediment is not to be attributed to ſalt, but to the intervening fæces, which hinder its ſalutary virtues. If it were in our power to remove thoſe thick Clouds from the ſun at our pleaſure, as it is to ſeparate the earthy fæces from Salt, we might every year make our ſelves a very commodious Summer, which nevertheleſs cannot be done, ſeeing that God the great *Pater familias*, hath reſerved this alone to His own Power.

As for the ſignature of Salt-petre, that certainly is very unequal, by reaſon of the great diverſity of this Salt, ariſing hence, that it is well or ill purged, is defiled with more or fewer fæces, or other ſtrange ſalts. The Common, which is required for the making of Gun-powder, is never perfectly pure, but alwaies mixed with other Salts, which cannot be ſeparated from it by the accuſtomed and uſual manner of ſolution and coagulation: Hence alſo you ſhall find no ſalt-petre, which can have that true and genuine ſignature, which God and Nature hath given it.

For by whatſoever vulgar labour and pains the Salt-petre which is got out of Stables, is purged by Solution and Coagulation, it is yet impoſſible that it ſhould obtain its due cleanneſs and ſignature. But to acquire that, it behoveth to uſe the following Operation.

Firſt, ſome pounds of Salt-petre are to be taken, which are to be purged by Solution and Coagulation, and that to be ſo often repeated, untill it acquire that purity which it is wont to admit by this vulgar Operation. Being ſo cleanſed, it is to be divided into two equal parts, and one of them to be mixed with white Potters-earth (or Tabaco-pipe-clay) of which little Balls are to be formed, to be dried in the Sun, and put into a Glaſs Retort well coated, or an Earthen one which will hold the ſpirits, that the pure ſpirit of Nitre may be Elicited by Diſtilation, and received in a large Glaſs adjoyned to the Retort, containing ſome Water, into which the ſpirit entreth freely. The other part of the cleanſed Salt-petre, being put into a

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Crucible, is to be reduced into a fiery fixed Salt, by the casting in of Charcoal, Tartar, or the Stellate Regulus of Antimony, then to be dissolved in rain Water, and filtred through brown Paper: So much only of this Liquor of fixed Nitre, is to be poured drop by drop to the distilled spirit of Nitre as will suffice for the fixing it. This Operation stirreth up a great noise, hissing and bubling, which ceasing, admonisheth to leave off pouring in any more, and indicateth that those two contrary Natures, to wit, the acid spirit, and fixed liquor of Nitre have mutually satiated one another, and the corrosive spirit hath lost its corrosive nature, and the fixed fiery liquor its fiery quality, both returning to the pristine nature of Salt-petre. From this liquor, the Glass being imposed in sand, the unprofitable Phlegm is to be distilled off so long untill a Cuticula or thin skin appear at the top of the matter, the sand being cold, the glass is to be taken out, and set in a cold place, and let stand for one night to shoot into long and sharp Chrystals, to be freed from the rest of the liquor, by pouring it off. This liquor is again to be freed from its unprofitable Phlegm by distillation, and again to be exposed to the cold to Chrystallise. Whatsoever shall remain after every Operation, is again to be Evaporated in sand, till the Cuticle appear, and to be reduced to Chrystals in the cold, which Chrystals may be used as common Salt-petre. The Chrystals of the two first Operations, are once more to be dissolved in Rain Water, Filtred, Evaporated and again Chrystallised, which are now white as snow, and extend themselves into length, thin, sexangular, and so equal, as if they were smoothed with a Plain: For not the least roughness or unevenness is to be seen in their superficies, but they Exhibit the true and natural Signature of Salt-petre. If any one shall be desirous of bringing this Salt yet to a higher purity, he may again divide this purified Salt into two parts, and from one draw the Corrosive spirit by distillation, and fix the other with Coals, and destroy both by Commixion, repeating the Operations as we have already taught, he will prepare a Salt-petre far more Excellent as well in Chymical as Medicinal Operations, as is manifest in many places of my writings.

If you Operate rightly all the Chrystals, none excepted, will be straight, sexangular, and equal in length, without any roughness, or unevenness, which is the true and genuine signature of well purged Salt-petre.

NB. The fixed liquor of Nitre, being left in the Air for a long time, and afterwards Evaporated to a Cuticle, shooteth into small Chrystals, representing the Effigies of Stars, whose figure appeareth in a rotundity so neatly and pleasantly Constituted, that those six Rays proceeding from the little body in the center or middle, seem to be most exactly dispосed and distributed to an equal distance and length, as in a circle. Truly it is an admirable and stupendious work of Nature, and a signature very unlike to the former, in as much as the six Angles of this, are comprehended after a Circular manner, but in the other they extend themselves only in length and sharpness. Those things which we have here delivered concerning the true signature of common Salt, and Salt-petre, the same are also to be understood of the signature of other Salts, which must be free from all their sordes and fæces, before they can shew forth their true signature.

Vitriol and Alum, which always shoot in a knotty and uneven Figure, after they have laid aside their defilements, exhibit clear and pellucid Chrystals, which yet will be much clearer if purged by several Operations. Yea, being reduced to their highest purity, they put on a Cubical figure like common Salt, nevertheless in Elegancy, Beauty and Pleasantness, giving place to that. Hence it is manifest, that nature is always ready for the gracing and adorning of her own fruit, if a helping Hand be afforded her by Art.

Before I put an end to this Treatise of the signature of Salts, I think it fit to point out in what degrees of Dignity, those two Words *Sol* and *Sal* differ, and are distinguished.

The word *Sol*, containeth two Circles and the half part of a square, O. is a whole Circle; S. hath two semicircles, which being conjoined, make an entire Circle; this being cut in the middle, and the half of the section turned upwards, towards the right hand, and the other half downwards, towards the left; giveth two semicircles forming the Letter S. L. is the half part of a square.

The word *Sal* hath only one Circle, to wit, the Letter S. consisting of two semicircles: Also one square, constituting the Letters A and L, which argueth that the good which is in Salt is partly tempered with the other Elements, and partly combined with Earth. The Sun far exceedeth Salt in purity, nevertheless it is not absolutely perfect because the Letter L containeth the half of a square, which sheweth that it cannot be endowed with an absolute and perfect purity, neither is it as Telescopes at this day demonstrate, by whose help those solar spots have been observed in those times. Neither also ought it to have an absolute perfection, the which belongs only to God, and not to any creature, in the number of which is the Sun: Nevertheless that he is the purest of all creatures, there is no Man dare deny. Hence it came to pass, that the ignorant Heathens, attributed to the Sun Divine Honour, thinking that besides the created, there was as yet another uncreated Sun; That is, the Omnipotent God himself, the Creator of the Elementary and shining Sun, which according to the Words of Christ shall also perish at the end of the World. By a like reason there is a twofold Salt, *viz.* one Eternal, Divine and Celestial; the other Terrestrial and fading. And as the Holy Spirit proceedeth from the Eternal Light, and Divine and Celestial Salt, for the warming and enlightening the Hearts of Men involved in darkness, and for the defending our souls against the crafts and deceits of Satan; so also from the Elementary Sun or Fire, and the Terrestrial Salt, proceedeth that most noble saline spirit for the strengthening of humane Bodies, defending them against various Diseases, and preserving them in good Health. Therefore there is an Eternal and Divine *Sol*, a Celestial *Sal* and Holy Spirit; and also an Elementary, frail Sun, Salt and Spirit. But it is our Duty to Love, Praise, Honor, and Adore the Eternal Sun, and to him to commend the health of our souls. And to use and enjoy temporal and fading things for our necessities, with thanksgiving.

The Explication of the Word ἅλς or Sal, *by* Bernhardus Gomesius.

BUT before we undertake to expound such excellent places, it behoveth us to invoke the divine Being; that, that which cannot be fore-known by any Augury and Divination, we not erring, but being led by the Divine inspiration and instinct, may at length expound;

pound; seeing that in the treating of things so Divine and unspeakable (that being wanting) if we should erre, it might be unpardonable, but if we shall piously and happily prosecute the matter, universal thanks and praise may be given to God alone, and to Christ the great giver of Salt. First, therefore we are to shew what the Celestial Salt is, and by what means it may be distinguished from the Terrestrial Salt, of which Christ speaketh in the Gospel. And because the Evangelical Words of Christ will be of great force to us in the speaking of it: And seeing that Christ when he would grace the Apostles with a high Title, called them the Salt of the earth: we think it not improper to call him the pure and undefiled salt of Heaven. For there is scarce any thing of so many preparations of an inferiour nature which excels the (as it were) Divine strength and efficacy of Salt in this part: For Christ and his blessed Humanity is the only Salt that is placed upon the Table of the Blessed. In whom Salt is the fullness of his infinite, inexhausted, and never-ending divinity; which abundantly filleth both Heaven and Earth and all things therein; and then again making himself palatable to us, he exhibits himself to be tasted most sweetly by all Men. For from that all things that are, and ever were and that shall be hereafter, have both received their being, and are made perfect, and without it could not be, for his Divine seasoning, or become palatable to the seasoner.

So this salt endeavours to express his, in whose name are both in Greek and Latin three Letters in one syllable; or rather to adumbrate this one and the same Divinity common to the three Persons. For tho' the Divine mystery and sacred things are shut up in Letters chiefly with the *Chaldees* and *Hebrews*, because GOD spake by them: Yet they don't always want the Elements of the tongues, especially the *Greek*, which was both derived from them, and words construed from these things are not imposed from their power but from their propriety, as *Plato* the greatest of the *Greeks* supposes; For that the divine infinity and Immensity is exprest and explicated in Greek letters, is shewn in the *Apocalyps*, Cap. 1. where *John* saw and heard our Lord Christ preaching of himself, I am α and ω, the Beginning and the End.

For as the sun, when it lightly touches with its perspicuous light, by that its image and splendour it is forthwith given: So the Heavenly and Infinite Divinity, with all Goodness, as it were His Brightness, does not only leave His impress Image in the things themselves, but also in Letters, with which those things are enlightened and made perspicuous. The like we have found in Salt, design'd in Greek notes; for that which in Latin is called *Sal*, in Greek is called ἅλς, express'd by the same Letters, though chang'd in order, and extended in three Letters, but one Syllable; but the Greek word expresseth both more plainly.

For the first Letter of it is α, which by its infinite roundness, as with two Horns, seems to be brought into the following Letters; which note plac'd with the Holy and Divine Trinity, signifies the first Person of it, to wit the Immense Father: Who as ἄλφα, is an infinite beginning in himself; so the same pours out and infinitely communicates his Nature to other two Divine Persons proceeding from himself: in one of which by Generation the Son; but in the other by inspiration he produces the Holy Ghost. And further, as α shews it self, its certain divine Operation follows that Eternal, Infinite and never ending Power of the same Mighty Father,, which also he sometime pour'd out from his Almighty Infinity, to procreate the Universe. As also in two horns, I mean Benedictions one is found to be in Creatures by the Creation of things; and the other in their Preservation; both by the Wisdom of the Omnipotent Son, and by the Goodness of the Holy Spirit.

But the middle Letter λ, is a Note full of sweetness: which is expressed with a Face, round, and composed for Mirth; and its Figure is not unlike a Circle. For from the superior Angle two sides stretching backwards, seem to make a Triangle, yet without a base and without end, as the Letter it self expresses. Which note again relates to the same Trinity, and represents the second Person of it, to wit the Son, or Word proceeding out of the most sweet Mouth of the Father: In which, two eternal Relations, as they call 'em, as to Infinite sides, are found: the one whereby he relates to the Father, from whom he proceeds by his eternal Generation; the other whereby he is Related to the Holy Ghost, whom he breaths together with the Father by an eternal and infinite habitude, and without any intermission.

But this note λ, I mean Christ the Son of GOD, and Mediator between GOD and Man, is never when time presents, wanting in his most beneficent Actions: that he who had taken the Human nature to the Divine, and was made the Corner stone, might (as he has done) connect the two Walls, to wit the *Israelites* and *Gentiles* as two sides, when he built in himself a strong and safe Sanctuary for them both, that flying to Him, they might escape the fearful sentence of everlasting damnation.

Lastly, the Letter ς, concludes this Monosyllable. This note is design'd with a certain sinuous and Circumflext line drawn from hence and thence, which going from the two extreams in the middle, designs as it were two distinct semi-circles; out of which is shewn that they are made and constituted. Which lineament compar'd with the Trinity it self, adumbrates the third Divine Person, to wit the Holy Ghost. For that spirit proceeding out of the Bosom of both the Father and of the Son, by one and the same Inspiration, so knits those two distinct Persons, to whom he is co-equal and co-eternal, by an Infinite tie of Love, that he remaining a distinct Person, might agree with them in their most simple, individual, and immense nature.

But as to the other Persons, so also his Communication is attributed to the Holy Ghost in time; which is wonderfully expressed by the shape of this Letter ς: Yet if we consider its lower extream, which seems as it were to arise of the former Letters of the Monosyllable, that is how it comes to be stretch'd chiefly towards the right hand: then from right to left, is wrested a little by ascending by a sinuous derivation: and thence at last, with the like following obliquity it ends again on the right hand. For the same Holy spirit proceeding from those two eternal and infinite Persons, as from an immense Fountain of Infinity, whilest from time to time he communicates his Gifts to the World, first those on his right hand, that is into the hearts of Men, he pours out to them that are illustrated and endued with the Divine Light of Nature: Then the same Light remaining, as it were bending from the right, ascending a little to the left, he brought forth the Mosaick Law written with the Finger of God, that is Dictated by him to the *Israelites*. Lastly, leaving the Mosaical Law on the left, he return'd to the right hand, and season'd the Evangelical Law deliver'd by Christ our Saviour, with his most Wise and Loving salt of Grace.

From

From all which, that which pertains to the buſineſs, appears from thoſe three Letters of *Sal*, making one Syllable; and again, this unfolding it ſelf in thoſe three Letters, ſhews us, that there is in *Sal* a certain impreſs or image of the Sacred and Individual Trinity, which we worſhip, Three in One, and One in Three. Which Trinity we ſhould have had, as an infinite, eternal, and inexpreſſible thing, commonly unknown, and incomprehenſible, and as a moſt remote Salt, never heretofore put into an humane or Angelick Saltſeller, we ſhould have left untouch'd; unleſs at length the Divine Perſon of this Trinity, the Word, in taking the Humanity to himſelf, as it were Salt into a Saltſeller, had preſented to our taſte ſo much Divinity; for this very Saltſeller, both in figure, is covered with the eternal ſplendour of the Father, as alſo pointed and illuſtrated with the embroidered Notes of His Paſſion, and likewiſe adorned with the Unction of the Holy Spirit is alwaies placed upon the Heavenly Table of the Bleſſed, to ſeaſon their Food and ſolemn Banquets, after an eternal and ineffable manner; for in him all divine, and moſt ſweet reliſhes and excellent taſtes of His eternal Wiſdom are ſeaſon'd anew; for Chriſt Himſelf is not only the Heavenly and moſt Wiſe ſeaſoner of the moſt opulent Feaſt, but alſo the very ſeaſoning, and thing ſeaſoned, and the Food which is ſo placed; for by Him his Heavenly Father, the King of kings, and magnificent Lord of lords, who out of His Goodneſs, and as He loves His good things, gives moſt liberally to all People a very large meaſure of Salt, that is, the help of His Grace to ſeek Him, and ask of Him Heavenly things.

True, that they who are called to the Heavenly Banquet may prepare themſelves to come in this meaſure, and moſt happily ſit down in it; but if (like fools) they refuſe to come, the Meaſure being taken from them, they will be plung'd into eternal puniſhment. In which reſpect they may be likened to Fleſh and Bones put into a Pot together, and water and ſalt put to them, hung over the fire to boil, and afterwards brought to the Table: Of which the Bones, which will be neither ſeaſoned by ſalt, nor ſoftened by water, are thrown under the Table, to be broken by Doggs; but the Fleſh, becauſe it is made tender by heat and water, and takes the ſeaſoning, is again ſprinkled with a purer ſalt on the Table, and eaten with the greateſt pleaſure: For as Bones are to Fleſh, ſo are Evil men mingled with Good: Of which theſe, when they will neither reliſh the Salt of Divine Grace, nor be waſhed nor ſoftened by pure Water, nor warmed by the heat of the Heavenly Word to be willing to divine things, will by the ſevere Judgment of the great Taſter Chriſt, at his magnificent Table, be reſerved to the moſt exquiſite puniſhments: Which obſtinate and unſeaſon'd Fools, He, for their hardneſs, finding unworthy his heavenly Table, plucks out from among the Righteous, and throws 'em down into Hell, there to be torn in pieces and devoured by thoſe infernal Dogs, to all Eternity.

But the Good, who have been ſeaſoned not only with the former, but alſo the later Salt, I mean with antecedent (as we ſay) and conſequent Grace, and are not only adorned with Virtue, but have ſuffer'd all croſſes and afflictions of this Life for Chriſt: Theſe, as Fleſh worthy His Table, the divine Taſter offering to God the Father, He ſeaſons with the new Salt of Glory; and though Aliens and Strangers, places them among the Angels and Citizens of Heaven, and with theſe Commands an equal Manſion of Bleſſedneſs to be given to them, though nevertheleſs they both come to the ſame felicity, by a different way of meriting it. For from what thoſe above Angelical Citizens, from the very beginning of things, and ſince firſt a full deſire ſeiz'd them, they have preferred the Heavenly Suppers of Chriſt to the mid-day Dinners of the moſt inſolent *Lucifer*; they have deſerved to follow thoſe Oppipary, and (as they call 'em) Princely Banquets ſeaſoned with the moſt ſweet Salt of Grace, and made reſplendant with the ſhining light of glory.

But the Inhabitants of the Earth, and Men, ſtrangers of Heaven, oppreſt by the great weight of a Body, and involved in the thick darkneſs, have made ſo long a Journey to the Country, by a far more tedious way of travelling; for the Univerſal occaſion of deſert is not to be ſnatch'd by thoſe in the Journey of Life it ſelf, and thoſe under the terminative moment following the Creation; but they ought rather ſtudiouſly and laboriouſly to take this by a continual and daily period of life, even to their death: Beſides that, the Journey to the Country is ſo hard and wearisome, and expoſed to ſo many dangers, brings ſo many anxieties upon ſtrangers every where, leads them into ſo much anguiſh of mind and troubleſome ſolicitudes, that it is plain, that not humane ability, but divine grace muſt cauſe, that ſtrangers are not deficient in the way, or that they do not wander from the true ſcope or end of their Journey: Which would be the fortune of every one in the World, unleſs Chriſt, by divine Counſel conſtituted the *Parochian* of the whole World, who giveth to his ſtrangers every where Salt and Wood, doth recreate and refreſh them, and alſo lead them into the way that directs to the ſame Heavenly Country.

This may ſuffice to be ſpoken of the ſignature of *Salts*, *Metals*, and *Planets*, at this time. He that diligently weighs it, will ſearch Nature deeply enough: If God grant me life, I ſhall publiſh a Tract of the *Signatures of Vegetables, Animals, and Minerals*; alſo in which I ſhall deliver many things good and profitable for all ſorts of Men.

O Eternal, Almighty, Bountiful, and Merciful GOD and Father, the Heat, Light, and Sun of Juſtice, enlighten and warm the hearts of all men, overwhelmed with a ſleepy numbneſs, ſhadowed with thick darkneſs, and made rigid by an horrid coldneſs, that they may ſee, know, love, and fear thee, and give thee due Thanks and Praiſes for all thy Benefits, and at laſt awakened, they may receive that ſight they had before loſt.

O Eternal Word of God, moſt ſweet, wholſom, and palatable Salt, Jeſus Chriſt, recreate and refreſh our ſick and miſerable ſouls, by thy Divine Virtue and Efficacy, that we being corroborated, neither Death nor the Devil may hurt us.

O Holy Ghoſt, the only Leader to Truth, who proceedeſt from the Eternal Fire and Heavenly Salt, comfort all the ſudden and deſarted Sheep, wandering this poiſon'd Marſh and Valley of Miſeries, among devouring Wolves, and corroborate them, that they may patiently endure their Croſs; and hereafter ſeparate them from the ſtinking Goats, and bring all the Elect into the green and heavenly Paſtures, that there they may continually behold the eternal Light, taſte the heavenly Salt, and enjoy the fulneſs of Joy, *Peace, Grace, and Mercy for ever.* Amen.

THE CONSOLATION OF NAVIGATORS.

In which is Taught

How they who Travel by Sea may preserve themselves from Hunger and Thirst, as also from Diseases, which are wont to happen to them in long Voyages.

Written for the Help, Comfort, and Solace of all those who make long Voyages for the Good of their Country.

THE PREFACE.

Reader,

OUR SAVIOUR CHRIST hath prescribed to us this Doctrine, that we should behave our selves towards our Neighbour, as we would that he should do to us; *yea,* that we should love him as our selves: *This He hath earnestly commended unto us, as the indispensible Will of God, contained in the Law and the Prophets. But although there be few who consider this, and all men seek only their own, yet one or other is still found, who calleth this duty to mind, and as far as he can, taketh every opportunity or occasion of serving his Neighbour. Although also there may be some who bear a love to others, and desire to assist them with their counsel and help, and yet are destitute of a power of giving them any thing; for no man can distribute more than he hath. Moreover, Covetousness and Envy so far governeth some, who have plenty enough to bestow upon others, that they will do good to none but themselves; of which sort there are many now to be found in the World, and hence Charity towards our Neighbour is wholly vanished.*

Seeing therefore that the Almighty, of His singular Grace, hath bestowed on me a small Talent, in searching out the Secrets of Nature, it is, without doubt, to the end that I should thereby do good to others; which Talent I would not bury, but have put to use in writing particularly from year to year, for the publick Good, and being affected towards my Neighbour, have made them publick. I have also determined, if time shall permit, to publish yet more and better things of this nature. But after that some described Voyages to the East *and* West-Indies, *and other far distant places, had happened into my hands, I perceived, not without great admiration what immense dangers occurr on the Seas, not only from Robbers and Pyrates, but also the adversitys of violent Winds, (to pass by many other Calamities in silence) by which the Ship, together with all in it that draw breath, are overwhelmed, and perish: And when I further contemplate those things with an intent mind, nothing seems to me more grievous and intolerable than Hunger and Thirst, or the want of Meat and Drink, which sometimes happeneth to Ships by adverse Fortune: For when they are overcome by the hand of an Enemy, they are wont indeed to suffer the loss of their Goods, but the Lives of the men are for the most part saved; which loss of Goods they may again easily repair by Merchandizing; and although they should be adjudged to death, yet their pain would quickly have an end. But if through an ill fate of necessity one be destitute of Bread and Water, and be forced to tear another in pieces to eat, that is of all the highest misfortune, and death it self were more desirable, than to sustain extremities and miseries of this sort. And although the want of Food doth not so frequently happen, yet the want of Water often falls out, whence Seamen are grievously tormented with Thirst, to whom, as in a most urgent Calamity, Mercy and Christian Compassion ought to be administred; but, Who can carry them succour afar off, and in a tempestuous Sea? And seeing that the Prosperity of* Maritime *Countries (where for the most part there is no Wine, no Fruits, no Mines, as in the upper* Germany, *and other places) consisteth only in Navigation, it were very well worth the while that this should be promoted to the utmost. I have therefore diligently considered the matter with my self, and have found that a Remedy may be applied to this Evil,* viz. *the want of Meat and Drink, by providing in time an* Apparatus, *or certain matter to be carried in Ships, which is of far greater efficacy in mitigating* Hunger *and* Thirst, *than common Bread and Water; yea, is able to prevent and expel that Disease which is so familiar to Seamen, to wit, the* Scurvy, *which is often a great hindrance to Sailing: So that this matter may be carried together with the usual Provisions, as a Preservative, and in case of necessity,*

ty, as if the Ship be overmuch haraſs'd with Storms, or be hindred by other infelicities, or detained longer in the Voyage than expected, it may be taken and uſed. It were indeed to be wiſhed, that theſe materials might never be wanted in any Ships, but as the old Proverb hath it, A ſuperfluous Caution never doth hurt; *therefore it is alwaies better to have a thing in readineſs, which we do not uſe, than to want it when its uſe is neceſſary. But what thoſe materials are, of which I ſpeak, and how they are to be uſed when need is, I ſhall communicate to my Neighbour, for the publick Good, not at all doubting, but that this invention will prove highly profitable to many who uſe the Seas.*

The Reader now underſtands what hath moved me to write this Treatiſe, viz. *the love of my Neighbour, and that I have not compoſed it only for the ſake of ſome few, but that I have emitted it to the publick, to the end, that thoſe highly profitable Inventions might afford help and comfort to all Mankind, and eſpecially to all that uſe the Seas, and ſuch who are infirm in their health: Nor do I doubt but that this my ſincerity of mind will be a great preſervative, comfort, and relief to thoſe who paſs the Seas, when they are in danger, by the benefit of which, they may eſcape various Chances and many Misfortunes, or beware of them for the future: For by this means which I ſhall here produce againſt Hunger and Thirſt, or other Diſeaſes which are wont to afflict Sailors, it will be found, that what I aſcribe to them may be fully deduced to the deſired effect. And therefore many Thouſands of men may thence receive Fruit and Profit, as long as the World ſhall endure; ſo that all who travel the Ocean, and are afflicted with any Diſeaſe, ought to rejoice, and give Thanks to God.*

Now, if any one ſhould yet doubt of the ſucceſs of this matter, (which nevertheleſs is ſhewed from ſo clear and irrefragable Fundamentals) I leave him to his freedom, whether he will put the matter into examination, and certifie himſelf of the Truth, before he give credit to it: Which alſo may be proved in a ſmall quantity, and not only on the Seas in Voyages, but on the Land alſo in the Houſe, among both the Sound and the Sick. Therefore let no man viliſie what he doth not underſtand, but let him commit the thing to trial, and ſee its reaſon and quality, before he contemneth it, or paſs an immature Judgment, leſt his curioſity or imaginary Wiſdom from a vain inſtinct, deceive him, or confound him with ſhame, when the proof ſhall ſhew it to be better than he could perſwade himſelf.

But that in ſome places I have uſed obſcure words, and have not propoſed all things ſo clearly, as that every man will be able to underſtand them, let no man wonder at this for I have certain reaſons for ſo doing; for no man will have any prejudice or injury thereby, ſeeing that nevertheleſs there are ſuch points of this ſort elucidated, which will remain after me ſafe and ſound: Therefore whatſoever the Reader ſhall here find written, let him eſteem it worthy to be received and embraced, as the Gift of God; the which, if I find to be gratefully accepted, more (God willing) ſhall follow. Alſo to all thoſe who ſhall have need, I offer the Medicaments aforeſaid, profitable againſt Hunger and Thirſt, and all Sea-faring Diſeaſes, a good quantity of which I will cauſe to be prepared, that every man may uſe them that will, and thence ſatisfie his deſire.

Wherefore it is the intereſt of any to whom I have committed the Preparation of this Medicine, to betake himſelf to it, and when need ſhall be, he will not be unwilling to uſe it. I have not ſought my ſelf in theſe things, being content to ſerve my Neighbour out of Chriſtian Charity. And although this my good Will ſhall not be accepted by fooliſh and ungrateful men, nevertheleſs God ſhall have the praiſe, who hath committed to us a mutual participation of love and good will, which alſo in his own time will grant the benefit of this to be derived and redound to my Children after me, by ſome pious Souls, of which I make no doubt, and therefore readily acquieſce in my preſent condition.

THE
Conſolation of Navigators, &c.

NOw to come to the Work it ſelf, we will point out the Remedies, whoſe uſe is ſo neceſſarily required in Navigation, and which is able to preſerve us not only from the preſſures of Hunger and Thirſt, but alſo from the injury of Diſeaſes; and they are no other than Corn and Water concentrated, or reduced into a more compact and narrow compaſs, the one for the extinguiſhing of Hunger, the other of Thirſt; and how they are both to be concentrated, and adminiſtred in caſe of neceſſity, I will exactly deſcribe and teach. And,

I. *Of the Concentration of Corn or Grain.*

AS for this, it is ſufficiently explained in the *Firſt Part of the Proſperity of* Germany; ſo that it might be here paſſed over; nevertheleſs I will make this ſhort repetition.

Make a Malt of Wheat, Barley, Oats, or any other Grain, as is uſual for the brewing of Beer, [*See the full Deſcription, Proſp.* Germ. *p.* 1. *cap.* 2.] and extract all the ſtrength with Water, as if Beer were to be made thereof: Afterwards boil this Liquor away gently in broad and ſhallow Veſſels or Coppers, to the conſiſtency of Honey: The Dreggs or Grains ſerve for Food for Cattel, but the inſpiſſated liquor or juice may be commodiouſly carried by Sea, and at pleaſure may be made into Beer with a mixture of Hops and Water. And becauſe for the moſt part eight Tuns of Grain afford one Tun of the inſpiſſated Juice, every Tun of Grain maketh a Tun and an half, yea, two Tuns of Beer, for every Tun of Liquor maketh at the leaſt eight, ten, twelve, or more Tuns of Beer, according as you will have it ſtronger or ſmaller. Therefore it is eaſier and cheaper to carry in a ſhip one Tun of this Juice, than ten or twelve Hogſheads of Beer, which eaſily corrupts and grows ſowre; but on the contrary, this Liquor being kept from the Air, retaineth its goodneſs; and this is of ſingular advantage, ſeeing that good freſh Beer may be made of this juice. To this alſo belongs another great Commodity, *viz.* that

that if this Juice be mixed inſtead of Water, with Wheat flower, and baked, it makes an efficacious Bread, which affordeth far more nouriſhment to ſailers than their common Bread, and containeth in it ſelf ſo great power, that it can refreſh and cheer the Sick: For which reaſon our Anceſtors did not in vain uſe to temper fine Flower with clarified Honey inſtead of Water, and make Bread thereof, which they called Cakes of Life, becauſe they were a great ſupport to the Humane Body, and as it were excited the Life it ſelf: But in our daies all things being ſubſervient to *Avarice*, you may ſee thoſe ſweet Cakes, made up with common, impure, and unclarified Honey, which cannot generate much good blood, or juices; but this our Bread will approve it ſelf to be of a greater ſweetneſs, nobility, and efficacy, inaſmuch as the elicited juice of Grain, affordeth a far better nouriſhment than Honey. But if any deſire to proceed farther with it, this concentrated Liquor of Corn will yet afford a greater utility, *viz.* if being inſpiſſated or brought to a thick conſiſtency, it be mingled with fine Flower of the beſt Mault, and Bread made thereof, which after it is baked, is to be cut into pieces, and again put into the Oven, till it be dry and hard, and then put up into Cheſts or Hogſheads, to preſerve it from the Air, and ſo carried to Sea; for then this Bread, when neceſſity requires, may be infuſed in warm Water with a few Hops, and excited to the ſeparation of its fæces, and it will acquire the ſubſtance of Beer: But that which doth not paſs into the Liquor, nor become Beer, may be heat in a Kettle, and ſome Butter put to it, which will very much comfort the languiſhing ſtomachs of Seamen, as well, or better than the eating of Bread ſoftened in Beer. But in regard that bitter Potions are not agreeable to all Palates, it may alſo be made into Beer without Hops, by mixing the bread with good water only, and afterwards boiling it for the evaporating the more phlegmatick part, which will have a pleaſant taſte. But this Bisket alſo, or twice baked Bread, may be ground ſmall in a Mill, and put up cloſe in Casks, and preſerved on ſhipboard. Afterwards, when need ſhall require, you may temper it with warm water, and in an open Hogſhead (which yet muſt have a bottom) ſuffer it to ſettle, and clear it ſelf; ſo the flower aſcendeth upwards, and the water attracteth the ſweet liquor, and hence becometh excellent and wholſom Beer, which if it be drawn out at the bottom of the Hogſhead runneth as clear, as if it had been made ſome Months; for there is now a ſeparation made of the pure part of the Bread, from the impure or groſs, and when that which is fine is drawn off, the groſs part may alſo be drawn out of the Veſſel, which being boiled with butter, affords a ſingular pleaſantneſs to the taſte; yea, alſo is of a greater ſalubrity, and better digeſtion in the ſtomach, than Peaſe, Beans, or French Barley boiled: So that here is nothing loſt, Bread or Meal of this ſort affording good Beer, and alſo a wholſom Food to eat. And thus on ſhipboard one may at any time of the year not only have good freſh Beer, but alſo thence may be made good Vinegar. And this may ſuffice to have briefly taught the manner of mitigating Hunger and Thirſt by concentrated Corn.

I ſhall now treat of the Cure of Diſeaſes, to which Seamen are liable, and which often bring death.

Now, if you regard the Nature of Man, you ſhall generally find, that he uſeth no meaſure or mediocrity in eating and drinking, but rather puts down ſo much till his belly will hold no more. Which Vice one man obtrudeth upon another, under the ſhew of kindneſs and good-will, from an old cuſtom and enormous abuſe, although in this one offends more than another. Therefore while the Appetite is more liberally indulged, than admitteth of a good digeſtion, the Liver aſſumeth a Chyle which is ſcarce half concocted: Whence alſo a groſs blood is generated; and ſo in proceſs of time the Viſcera are filled and obſtructed with craſs and viſcous humours; hence they cannot perform their office as they ought, but rather many and divers Diſeaſes do ariſe, according as the heap of crudities encompaſs the Fleſh covering the Joints, obſtruct the Veins and Nerves, and deprave all the *mediums* of nouriſhment; therefore when the Evil cometh to that paſs, and grows prevalent, the whole body is ſenſible of it, but chiefly in that place where it fixeth its ſeat: And hence neceſſarily one part ſuffereth by the hurt of another, till at length all the powers go to decay, and the whole body languiſheth, and cannot help it ſelf, and unleſs ſuccoured by Art, dyeth.

For theſe cauſes Phyſick was invented, that thoſe Diſeaſes ariſing from intemperate eating and drinking, might be met in the way, the perverſe Enemy or primogenial Vice of the body be removed, the viſcous and phlegmatick *Saburra* of the depraved humours diſſolved and opened, and the oppreſſed Members expurged, that ſo the body may again recover its former healthful eſtate; the which is wont to be done by divers means, and in various manners, according as the Phyſician underſtandeth the Diſeaſe to be, ſo he alſo affords his help, *viz.* taking it away by Evacuations upwards or downwards, by Sweat or Urine, or by other means, as the nature of the Diſeaſe requireth. But by which way ſoever the recrements of the malignity be diſſipated and expelled, and the inward parts be freed from them, it is well, and the Phyſician hath performed his Office, alſo meriteth Thanks and a due Reward. Therefore whoſoever well underſtandeth the nature, riſe, and birth of diſeaſes, and alſo poſſeſſeth a good Medicine, or can obtain one, is fitly qualified for a Phyſician; but he who knoweth not the diſeaſe, nor is alſo furniſhed with fit and efficacious Medicines, nor knoweth how to obtain them, grievouſly erreth by trying Experiments ſo long, till the Evil more and more encreaſing, the Sick at length expires; the which is ſo well known that it needeth no proof; ſo that many who have contracted diſeaſes from immoderate eating and drinking, are afraid to commit themſelves to an unskilful Phyſician, but chuſe rather to cure themſelves by abſtinence and faſting, which way is indeed ſafe, although it be tedious and full of delay.

Others again uſe vulgar and trifling Medicines, and yet recover their health, tho' late, thinking that this happened by the uſe of their Medicine, when nevertheleſs the length of time, and the ſparingneſs of their meat and drink, during their illneſs, whence the ſuperfluous pravity of humours hath gradually waſted, hath effected this; which alſo ſometimes happens to thoſe who take no Phyſick; but by how much the greater the pravity of the humours is, by ſo much the longer it will be before Nature will be able without help to overcome and expel them. The which, if it take 4, 5, or 6 weeks to accompliſh, a Phyſician (by the benefit of good Medicines) might effect it in 2 or 3 days. So great is the difference between a Cure which Nature performeth in a long time, and that which is quickly done by Art.

But here it may be objected, that all diſeaſes take not their beginning ſo much from an evil and ſuperfluous humidity, as from manifold other cauſes, one being

being derived from this, another from another cauſe. To this I anſwer, that all thoſe affects of the Body which exiſt in the skin, and do not proceed from external accidents, as wounds, bruiſes, falls, *&c.* whence the bruiſing of the body, and alſo Death, at length happens, do draw their original from the intemperance of eating and drinking, which adminiſter occaſion, and furniſh matter to noxious humours, which hence occupy and infect divers Members; for one part affecteth another, till the whole body abounds, and is imbued with a multitude of viſcous humours. When the Stomach is over-gorged, and its tone is ſpoiled, it contracteth cold crudities, and falls into a dangerous eſtate, How then ſhould it rightly digeſt the Food? and, What good can it tranſmit to the Liver? And ſeeing the Liver receiveth nothing but what is evil and depraved, What can that procreate of good, and diffuſe throughout the whole body? Therefore as I have ſaid, one Member muſt ſuffer by another, till the errour become common. Whilſt a Tree or an Herb in the ground remains temperate, that it be neither too wet nor too dry, its root draweth from the earth virtue, and imparteth it to the trunk, and the trunk to the branches, leaves, flowers, and fruit, and is able to produce fruit conducible to health, for many years. But if the root be ill placed, the Salt being ill diſpoſed, whatſoever the ſtock there finds, it aſſociates to it ſelf, and alſo communicateth the ſame, and no better to the branches: And if it ſtand too wet, it brings forth an inſalubrious Fruit, which by reaſon of too much moiſture, falleth off before it is ripe, in whoſe ſtead fungous protuberances ariſing from putrefaction, ſpring up, and ſuch Plants do not endure long.

Again, if the Root ſtand too dry, it cannot thence have juice ſufficient to nouriſh the Tree, and bring forth Fruit, but will by degrees wither away and die. So alſo it is with Men, and their Diſeaſes; for according as their Bodies are treated, they are healthful and fruitful, or elſe diſeaſie. Now ſeeing that I have proved Diſeaſes from redundancy or humidity, or from drineſs, it will be eaſie to provide preventive Remedies againſt them; or if any errour or delay ſhould happen in this, it may be amended in the curative part, by which the Evil may be aboliſhed. Theſe are required to be of that nature and property, that they attract the ſuperfluous and pernicious humours from all the Viſcera and principal Internal Members of the whole Body, into the Ventricle, conciliate a new concoction or digeſtion, ſeparate the pure from the impure, adjoin the one to the Liver, and eject the other by Seige: And ſo the body is not only freed from depraved burthenſom humours, but alſo recovereth its ſtrength, and is cured of all Infirmities. Which manner of Curing, at this day, the more the pity, is known but to few; ſeeing that it is not to be effected with common Herbs, but ſomewhat better is required, than what the Philoſophy of old Women preſcribeth: Nevertheleſs there is a great efficacy in certain Simples; as may be ſeen in *Hellebore* or *Helleboraſter*, by whoſe benefit the Ancients prolonged their lives, by the daily uſe of a certain doſe of it. Moreover, Tabaco where it cometh to maturity, effecteth things to be admired, being rightly prepared and adminiſtred; yea, even that which (being crude) is taken in Pipes, cooleth and refreſheth the body, and alſo in ſome meaſure relieves againſt Hunger and Thirſt; which common experience daily witneſſeth. But whence this Virtue happens, Tabaco-takers neither know nor care, but acquieſce, in that they either receive pleaſure or profit by it: Therefore, if Tabaco, or any other vulgar Plant can perform ſo many and ſo great things, being yet crude, without any preparation, What would not an Extract or concentrated Eſſence of all the Vegetables do, being rightly made? which nevertheleſs ought to be of that nature, that it may not only diſpel every heap of malignant humours, but alſo ſtrengthen the inward parts, and preſerve from all things which may happen in the generating of a Diſeaſe.

Such a Medicine is that which I here preſent to all thoſe who continually uſe the Seas, and beſides the Scurvy, undergo many other Diſeaſes; by which they may not only efficaciouſly protect themſelves againſt the aſſaults of Diſtempers, and hinder their progreſs when already began, but alſo under the preſent want of Meat and Drink, may make ſound an infirm body: But how, and from what Ingredients this Euporiſt may be made and prepared, needs not to be manifeſted to every one. This is a great Gift of God, which ought to be honoured, and not proſtituted to the Unworthy. Let it ſuffice at this time, that ſuch a Medicament may be obtained at a ſmall price; I will not ſuffer it to be buried with me, but will leave it to others, who may keep it, and ſell it to thoſe who deſire it at a reaſonable rate.

This is given in form of an Electuary, and may be taken for a Preſervative, daily, or every ſecond, third, or fourth day, as occaſion requireth, in the quantity of half or a whole Peaſe, upon an empty ſtomach, faſting two hours after it, if need be, but if not, Food may be taken preſently after it, although it is better to abſtain ſome hours: But when a Diſeaſe hath already invaded a man, whether it be *Fever*, *Scurvy*, *Headach*, *Catarrh*, or any other Diſeaſe infeſting Seamen, let the Patient forthwith ſwallow down of this Electuary the magnitude of an ordinary Peaſe (for it hath no unpleaſant taſte) and ſweat if he can; if not, let him keep however a very moderate Dyet all the day, and in Summer time, as much as he can, avoid the intenſe heat, and in Winter, the extremity of Cold; the next day let him take the quantity of a Peaſe or two, and ſo let him encreaſe or diminiſh the doſe, according to the ſtate of the Diſeaſe. Theſe things being well obſerved, all Sickneſſes will give place.

If a man carry with him but half an ounce of this Medicine to Sea, in a long Voyage, he will poſſeſs a *Panacea*, both for the preventing and curing all Diſeaſes incident to his body.

This is of very great uſe and profit eſpecially for Maſters of Ships, to whom I alſo highly recommend it as ſuch, and not to them only, but alſo to all the Inhabitants of the Earth, to whom it promiſeth no leſs ſucceſs. If a Medicine can be invented, (beſides that univerſal one of the Philoſophers) accommodated to all diſeaſes, truly this is one, and will perform all, or even more than I have attributed to my *Catholicon* in the *Second Part of my Pharmac. Spagyr.* that is a Powder, but this, of which I now diſcourſe, an Electuary prepared of certain good Ingredients and Sugar. I affirm again, That there is no diſeaſe, whether internal or external, for the curing of which this Medicine doth not ſuffice; for it doth not only reſiſt the *Fever*, *Scurvy*, and *Pox*, but even the *Gout* and *Leproſy* it ſelf, provided they be not too much fixed and radicated; yea, although they be very inveterate, and cannot be throughly rooted out by this Medicine, nevertheleſs it gives relief in them, and renders them more tolerable, and hinders the acceſſion of the daily fits, and keeps it under. Certainly where this Medi-

cine can yield no help, Nature muſt be wholly ruined and tired out. What I have here written, is the Truth, which I am able to prove by experience; however it is free for every one to believe or not believe me, as he pleaſeth: Chriſtian Charity to my Neighbour hath compelled me, if it be well taken, it is well, if not, I have done my part, and diſcharged my Conſcience. Nor will I inſiſt any farther on the praiſe of this *Panacea*, I have ſaid enough to thoſe who believe, or can underſtand me.

And thus I have ſet before the whole World, that Medicament which can preſerve from, and cure the moſt grievous Diſeaſes accompanying Ships and Voyages, and alſo relieve in the extremity of Hunger.

This being done, there yet remains another Remedy whereby the Body may be relieved, and refreſhed in extremity of Thirſt, when drink is wanting; and this is done by Water concentrated, which is of ſo great virtue, that it giveth ſuch a refrigeration to a thirſty Palate, that in the whole World there is not the like. Seeing therefore that in long Voyages Water is often wanting, and putrefieth and ſtinketh, it will be very neceſſary here to declare and ſhew, how Thirſt may be reſtrained and rendered tolerable in time of neceſſity. Then alſo how common Water may be preſerved from corruption; moreover, that one Tun may effect as much for the quenching of Thirſt, as otherwiſe 2 or 3 Tuns of common Water can. Which is not only my ſaying, but the Truth it ſelf; as I will here prove by manifeſt teſtimonies: And this is to be done as I have ſaid, by Water concentrated and coagulated. But what that is, I will firſt ſhew, and then by what means it is to be prepared and uſed.

To explain the genuine Property of concentrated Water to many, may ſeem unneceſſary, in regard that Seamen are not skilled in ſuch diſcourſes, nor careful about them; and that they rather belong to Philoſophers, and the Contemplators of Nature, that they may render the knowledge of them familiar to themſelves: But this Treatiſe without doubt will come into the hands of wiſe and experienced men, as well as into thoſe who uſe the Seas, and therefore perhaps I ſhall not loſe my labour, if I ſomewhat more exactly deſcribe the nature of that water.

It is ſufficiently evident to all thoſe who have ſaluted but the Threſholds of Nature, that the Omnipotent God, in the firſt Creation of the World, hath ſeparated the Elements from the rude *Chaos*, as alſo the Elements from one another, placing the Earth in the bottom or foundation of the Center, and over that the Water, over the Water the Air, and over the Air the Fire; ſo that every of them holdeth its own receptacle and ſeat, from whence, without the will of God, it cannot recede. Nevertheleſs, we find that one alwaies participates of the other, and none is found without another, although one be predominant and viſible; but the reſt exiſt in it inviſibly, and by the skill of an Artiſt, may viſibly be deduced from it. So from the Earth we elicite Air, Water, and Fire; from the viſible Water, natural Earth, Air, and Fire; again, from the Air, Earth, Water, and Fire; and from the Fire, Air, Water, and Earth. Hence the Elements are continually circulated from one ſpecies into another, which indeed we do not obſerve or perceive, and no Element can want an Element, but draweth its life and nutriment from another. The Fire cannot burn without Air; the Fire operateth upon the Water, and of it maketh Air; the Water reſteth in the Earth, and moiſteneth the ſame; the Fire impregnateth the Air; the Air inſinuateth the Seed into the Earth; the Earth nouriſheth and cheriſheth the Seed unto perfection, and afterwards bringeth to light what it hath conceived, and carried in its belly.

Theſe things are only hinted at by the way, and not without cauſe.

But to return to our concentrated water, that we may explain its nature, know, that water is the *principium* or beginning of all the Elements; which thing is ſufficiently manifeſt, and may be ſeen daily, eſpecially in the *ſubterranean* Mines of Metals, whoſe inward bowels are ſo penetrated, that there is not only water, but we alſo ſee it to be quickly tranſmuted into various forms of Mineral Bodies, the which without is familiar; and the more limpid or clear the water is, the brighter Stones and purer Minerals it generateth: Of which you may read more in that Treatiſe, [*The Second Part of the Mineral Work*] where I have deſcribed the generation of Minerals; alſo that Flints and Sand, in the Earth, Rivers, and Seas, receive their encreaſe from water, is ſufficiently manifeſt; for all ſand was primitively water only, and hath paſſed out of water into hard ſand or ſtones, and into which it may again be changed. But this is not to be uſed as a Remedy againſt Thirſt, becauſe it is now too hard, and difficultly returneth to its firſt matter, *viz.* Water, except by the benefit of another ſubject, which is a *medium* between Sand, Flints, Cryſtal, and common water, *viz.* Salt, which hath an agreement with the nature both of common water and that of ſtones, and may be eaſily changed into either of them; as you ſhall hereafter hear. But this concentrated water, which I here propoſe for the vanquiſhing of Thirſt, and refreſhing of the body, is ſalt prepared and concentrated, either of the waters of Mountains, or of the Sea, which are of the ſame goodneſs: Of which afterwards is prepared by Art a water ſo excellent, that for repreſſing of Thirſt and refreſhing a languid body, there is no Remedy in the world may be compared to it.

Here ſome one ignorant of natural things may object, and ſay, How can it be that Salt ſhould repel Thirſt, ſeeing that when it is eaten, it exciteth and encreaſeth the ſame? To this I anſwer, That common ſalt, as it is firſt extracted or boiled, can in no wiſe reſtrain the Appetite of drinking, but rather provoke it, except its pravity be firſt corrected and deputated; for every ſalt ſeems to have laid aſide its nature and property, ſo long as it contains earthy and groſs fæces, which nevertheleſs may be removed from it by ſolution, filtration, and coagulation; whence alſo it is bitter, aſtringent, and hard; but this harſhneſs and terreſtreity being removed, the ſalt remaineth no longer hard, but is reduced into a ſoft and fluid Liquor, not ſweet, but pleaſantly acid, taſting like an Apple or the ſtones of Grapes. And this purification muſt be made by the force of Fire, *viz.* when the ſalt in deſtilling is ſublimed in earthen Veſſels, by ſtrong Flames; and then the pureſt and moſt noble part only aſcendeth, and the more groſs and earthy remaineth in the bottom, and is of no uſe; but the purer part is of great power and virtues, not only againſt Thirſt, but is alſo very neceſſary for many other things, as ſhall hereafter be demonſtrated. That otherwiſe in impure common ſalt a great Virtue is latent, let no man doubt, ſeeing that it may be daily obſerved: Wherefore that excellent Philoſopher *Plato* writeth, *That in ſalt there is ſomewhat divine*; and according to the opinion of other great and wiſe men, GOD hath openly manifeſted Himſelf in Fire and Salt, and the ancient Philoſophers were hence taught to prepare their

their *Univerſal Medicine*; which Art of preparing they have called *Alchymy*, or *The melting of Salt*; but I ſpeak not this by experience, in regard that I never yet durſt attempt ſo great a Secret, being contented with ſmaller things; but this I know, and have divers times done, *viz.* that by a certain Artifice, I have precipitated from common Salt ſome corporeal Gold, although without profit, and only to ſee the poſſibility, which without thoſe precipitations remaineth ſpiritual, and at length by them obtaineth a corporeal ſubſtance.

Indeed the greateſt Myſtery of the whole World conſiſteth in Fire and Salt, and with thoſe two (after God) nothing may be compared; for the Flame raiſeth Light out of Darkneſs, which otherwiſe none but God can do. It is alſo fit to reſtore life to the dead, no otherwiſe than the warm Sun or Oven reviveth Worms, Frogs, Serpents, Flies, and other Inſects, which have been killed by the Cold; of which I have made mention in the ſecond part of my *Pharmacop. Spagyr.* as alſo in *Miraculum Mundi*, and its *Explication*. Many men uſe Fire, yet know not what they have or uſe: So alſo it happeneth with ſalt, all men uſe it out of cuſtom, but obſerve not what they taſte. Salt is a thing of great moment; by it we give ſtrength to reſiſt Corruption, both to the living and the dead.

And ſo it is, that if men had not ſalt, or at the leaſt thoſe Plants and Fruits, in which it dwells, they would putrefie while yet living. Which would alſo happen to Cattel, if they did not eat Graſs, which contains in it ſelf its own ſalt, and ſufficeth them in feeding; nevertheleſs if ſomething better were given them with it, it would be very profitable for them; for if to horned Beaſts, as alſo Hogs, ſome ſaltneſs were given with their meat and drink, they would thereby acquire much ſtrength and fatneſs.

Seeing therefore that Salt, whilſt it is yet groſs and rude, and defiled with many impurities, performeth ſuch things in living Creatures, and preſerveth Fleſh and Fiſh, as alſo all Herbs and Graſs, long from Corruption; What could not ſuch a ſalt do, which by the help of Art hath received a greater purity than Nature hath beſtowed upon it? For the Fire containeth a power of correcting and purifying ſalt, and converting it into a finer and better ſubſtance. The common ſalts which we daily uſe, do indeed give a reliſh to all Edibles, and preſerve them from putrefaction; yet nevertheleſs they dry, aſtringe, and bind the belly; alſo excite Thirſt; but ſalt being rectified and depurated, communicateth a ſweet and grateful taſte, alſo more powerfully reſiſteth Corruption than the other, neither doth it bind the belly, but keepeth it ſoluble, expelleth Urine; nor doth it cauſe Thirſt, but rather taketh it away both from the ſick and ſound: So great a difference is there between the common and corrected and depurated ſalt, which Ruſticks little underſtand. The nature and property of common ſalt is known to every one, as far as concerns the Kitchin, but the rectified is known to few: And the Spirit of Salt, which is in uſe in Apothecaries ſhops, and which they alſo ſell, being for the moſt part not rightly prepared, effecteth little, and therefore not frequently uſed: But if it were made and rectified as it ſhould be, it would not only have a pleaſanter taſte, but alſo a better operation. So many things bear Names which are not agreeable to the thing, and therefore cannot perform what is expected from them.

The Ancients have aſcribed great Virtues to Spirit of Salt in Medicine, which it indeed hath, if after its deſtillation it be well rectified and dephlegmed; but if it be adminiſtred ſo crude as it aſcends the firſt time, it may perhaps do more harm than good, inaſmuch as a great deal of terreſtreity comes over with it, which in the rectifying remaineth in the bottom of the Glaſs, as an inſipid, bitter, or aſtringent ſalt. And although this be well enough known to ſome, nevertheleſs they abhor to rectifie their ſpirit, becauſe the ſpirit in rectification loſeth a great part of its weight, by ſeparating its ſuperfluities.

I taught, many years ſince, how to prepare the ſpirit of ſalt in quantity, whoſe deſcription is alſo exactly ſet down in the *firſt and ſecond part of my Furnaces*. It alſo demonſtrateth its utility in Metallicks; as manifeſtly appears in the *firſt part of my Mineral Work*, where the manner of extracting Gold from Stones, by its help, is taught. Altho' the ſpirit for that work ſhould be prepared after another manner, than that which is to be uſed at Sea, or on ſhore, for the curing Diſeaſes or repreſſing of Thirſt; wherefore I'll firſt teach the way of making this, and then alſo ſhew its Uſe.

As for the manner of anatomiſing Salt by Fire and Art, and tranſmuting it into a pure and ſweet ſpirit, it is various, for one uſeth this, another another way, as I alſo have taught divers waies, in the *firſt and ſecond part of my Furnaces*; but here I will appoint another, which is the beſt and moſt commodious for the uſes treated of in this Book, and is thus to be performed.

Get ſome ſtrong Retorts made of good Earth (but Glaſs is better) fill them with the following mixture of Salt and Earth, then according to Art, deſtil thence a ſpirit gratefully acid, which duly rectifie, and it will be prepared for Uſe. The ſalt is to be thus prepared for deſtillation: Fill a great Crucible with Sea-ſalt, which cover with an earthen Cover, and by degrees put Fire about it of flaming Coals, encreaſing it, until the ſalt be all over red-hot; this being done, preſently remove it from the fire, and let it cool; by this means, if any greaſie ſordes, or other combuſtible impurities, adhere to the ſalt, they will be conſumed and vaniſh. Diſſolve the ſalt in common water, filter or ſtrain it through a fine cloſe Linen Cloth, that the fæces may be ſeparated; the clear Liquor evaporate in an earthen glazed Veſſel, till the Cuticula appear, then make little balls of clay and ſand, about the bigneſs of Walnuts or Pigeons Eggs; dry them, and heat them red-hot in an earthen Veſſel, and ſo the fat ſpirit of the Earth will be burnt away; then imbibe thoſe balls with your ſtrong ſalt water, by letting them remain in it for ſome hours, that they may drink in as much of it as they can, then take them out, and dry them: With theſe fill your Retorts, and adminiſter Fire by degrees, and at length urge with the ſtrongeſt flames, ſo long, till they emit no more fume, for then all the ſpirit is come forth: The Receiver muſt be of Glaſs, and very large, in whoſe bottom muſt alſo be a little water, to attract and condenſe the ſpirit. The Deſtillation being finiſhed, the ſpirit is to be rectified by it ſelf in a low Cucurbit in ſand, and firſt the water or phlegm will come over, (which you may keep for another deſtillation) then the pure and ſweet ſpirit will riſe limpid and clear, and an unpleaſant ſalt will remain in the bottom, which is to be caſt away, and the ſpirit to be kept for the uſes to be ſhewed hereafter.

But if you deſire to have the ſpirit yet more pure, and efficacious, you may rectifie it again upon calcined or powdered Flints, which will retain in the bottom whatſoever is yet groſs or impure, and the ſpirit will be rendered very pure and ſubtile; for the Flint at the

firſt

firſt was Water and Salt, and hence both contain in themſelves ſo ſtreight a communion. This may be ſeen among the Glaſs-makers, who reduce Sand or Flints into clearneſs by melting, that thence they may make pure Glaſs; for Salt in the Fire diſſolveth Sand, Flint, Cryſtal, and together with them receiveth the Eſſence of Glaſs; yea, and theſe very ſpecies and matters, by the help of an *Alkaly* Salt, are reſolved into a diaphanous Glaſs, which being put into common Water, melt like Salt; of which I have diſcourſed in the *Third Part of my Furnaces*. When we deſtil the aforeſaid rectified Spirit of Salt again from powdered Flints, from the innate love which it hath to the Flints, it carrieth ſome part of them upwards with it ſelf, and is made better for uſe in all Diſeaſes, eſpecially in the *Dropſie*, *Stone*, and *Gout* it is an excellent Medicine. The Flints remaining in the bottom, yield a water which diſſolveth the hardeſt Cryſtals, and is acid like the ſpirit of Salt, and nothing elſe but part of it coagulated with them, and may be adminiſtred in all caſes as the Spirit of Salt.

Let no man wonder that I aſcribe more to this Spirit rectified with Flints, than to any other common ſpirit of ſalt; for few know what Virtues are latent in flints or ſand. All Birds and four-footed Animals uſe ſand. Many men adminiſter the powder of Flints and Cryſtal, for the corroborating of weak ſtomachs. Hens devour Sand and ſmall Pebbles, that they may thence have matter for their Eggſhels, and being debarred of it, lay Eggs without ſhells. Wherefore I affirm, That this ſpirit of Salt, abſtracted from flints, to be better in many Diſeaſes than the common ſpirit, and eſpecially the Cryſtals, or ſpirit of ſalt coagulated, of which we have above made mention.

Let this ſuffice concerning the Preparation of ſpirit of ſalt. Now we will alſo teach, how it is to be adminiſtred either at Sea or on Shore, for the repelling of Thirſt, and the Cure of Diſeaſes: To what other purpoſes the ſpirit of ſalt ſerves, beſides Medicine, I have ſhewed elſewhere; here my intention is only to ſignifie of what great uſe and profit it may be in Voyages to Sea, which was the only occaſion of writing this Treatiſe.

Of the Uſe of Spirit of Salt *in Ships, againſt Thirſt, and alſo the Scurvy.*

IN the firſt place, this ſpirit is profitable to the body, when a ſmall quantity of it is put into the Hogſheads of Water, whereof Seamen and Souldiers drink, to which it gives a grateful acidity, like that of Wine, and is far more effectual in quenching of Thirſt, and in leſs quantity than other Water, and beſides preſerves the Water from corruption and ſtinking, which otherwiſe in long Voyages it is wont to ſuffer, contracting a muddineſs, blackneſs, and breeding Worms, which generate the *Scurvy*; for the Water containing the ſpirit of ſalt, cannot corrupt; which ſpirit alſo preſerveth other things, both living and dead, from putrefaction. And becauſe the water with the acid ſpirit of ſalt extinguiſheth Thirſt more than any other, it neceſſarily follows, that ſo great a quantity of water need not be carried for a Voyage, as otherwiſe is uſual. Moreover, ſeeing that the ſpirit of ſalt reſiſteth all putrefaction, it ſuffereth not the *Scurvy* to take root, for it refreſheth and exhilarateth a man with great vigour, corroborateth the ſtomach, and all the members of the body, it conſumeth pituitous matter in the Reins and Bladder, expelleth Urine and Stone, keepeth the Belly ſoluble, promoteth digeſtion; it ſuffereth no Diſeaſe to grow from corruption of the Blood, to which otherwiſe Sea-faring men are ſubject: Moreover, it exerteth its ſalutiferous Virtues, if a little of it be mingled with Wine and Beer, in Ships, which will long preſerve it in its goodneſs and ſincerity, cauſing it the better to repreſs Thirſt, and therefore to go the farther in uſe. Alſo Beef, Mutton, and Veal may by it be preſerved a long time, *viz.* if they be put into ſtone pots, and powdered or condited with ſome ſalt, diſſolved in the ſpirit of ſalt. Nevertheleſs it behoveth that the Fleſh be without many Bones, and that all the legs, ſhins, or ſhanks be cut off. Moreover, a very ſmall quantity of the ſpirit being added to the water in which Fiſh is to be boiled, maketh the Fiſh eat firm and cloſe, and of a much ſolider reliſh than when ſprinkled with Vinegar. So alſo Raiſins being put into water impregnated with ſpirit of ſalt, will grow ſoft, and ſwell, and will recover their ſtrength and ſweetneſs, as if they were freſh plucked from the Vine, which will afford a great refreſhment to thoſe who frequent the Seas.

In a word, this ſpirit may commodiouſly be uſed, not only in Water, Wine, or Beer, but alſo in all ſorts of Food in Ships; for it giveth a very pleaſant taſte to all meat and drink, and correcteth them ſo, that they become more wholſom. It hath alſo another very profitable uſe, *viz.* If in hot weather but one drop, or ſo ſmall a part of the coagulated ſpirit, as the magnitude of an Hempſeed, be mixed with ſugar and held upon the Tongue; for it ſo cooleth the mouth, and allayeth Thirſt, that there will be no need of bad Water or Beer, by which the body is more violated than corroborated, through drinking often and much of them. Nor is this the leaſt of its virtues, that when in a long Voyage there is a want of water, a little more of the ſpirit of ſalt may be put into it than will ſerve for a grateful acidity; for ſo it will quench Thirſt for a longer time, and in a leſs quantity than otherwiſe a greater quantity of water can do. Yea, although the Ship ſhould be caſt away, and the men forced to betake themſelves to their Boat, or broken pieces of the Ship, as it often happens, if they have but an ounce of the ſpirit of ſalt in a Glaſs, or half ſo much of it coagulated, in defect of Drink, they may ſuſtain their lives and health therewith ſo long, till it pleaſe God to afford them a means of *getting* to ſhore; nor will they be forced to drink their own Urine, or Sea-water, which is pernicious.

Theſe and the like Virtues the ſpirit of ſalt ſheweth in Ships, which for brevity ſake, are not all declared.

I have alſo meditated how the *Sea-water* may be made ſweet and drinkable by precipitation, which would be very deſirable in want of water: And ſo far I have *attained*, that I can precipitate a good quantity of the ſalt from the water, which alſo becomes much ſweeter, but yet not ſo fully, but ſome ſaltneſs remains in it. Although in caſe of neceſſity this water may be uſed in Ships for the boiling of Peaſe and Beans, as alſo for the fermenting of *concentrated Corn*. What I now know concerning this precipitation, I will make manifeſt for the good of my Neighbour, and ſhew a good beginning how Sea-water may be made fit to drink.

There is a certain kind of Mineral called *Mary's Ice*; it is not the *Muſcovian* Glaſs, as perhaps ſome may think, but another thing; when it is heat red-hot in

in the fire, and ſo caſt into Sea-water, it is preſently reduced to a tender and white powder; which being done, the Water will be agitated and moved hither and thither; then the Powder attracteth to it ſelf part of the Salt from the Water, and ſettleth to the bottom of the Veſſel, and the Water groweth clear, which may be poured out, and if this labour be once or twice repeated, the Water, by this precipitation, will indeed be made ſweeter, but not altogether potable. Alſo the ſalt or ſolution of *Saturn* diſmiſſeth much of the ſalt from Sea-water, yet by that it is not rendered drinkable. The beſt way which I now know, is this which follows, but it is ſomewhat coſtly: Nevertheleſs when neceſſity urgeth, ſweet and good water profiteth a man more than a Bond of an hundred pieces of Gold. Hence this Art deſerveth to be honoured, although it be coſtly; for a man ready to die with Thirſt would give all he hath for a draught of Water to ſave his Life: Wherefore ſomewhat of this precipitation may be committed to Ships, for their preſervation, which may be uſed in great neceſſity, but if no ſuch be, it may be brought home again, and kept for another Voyage, ſeeing that it will in no wiſe decay, but be as good after an hundred years, as the firſt day of its preparation.

But what this is, there is no need openly to divulge, but he who deſireth it, may come to me and have it: But for the information of thoſe who are skilful in *Chymiſtry*, I will intimate this; That the precipitation of Salt from Water, is neceſſarily to be performed by a ſingular ſand, which doth not only drive ſalt downwards, but alſo all Phlegm, Sordes, and Impurities; ſo that although the water ſhould be like to a Fen or Dunghill in filth and ſtink, by the benefit of this precipitation, in a few hours, it ſhould become like clear Fountain water, becauſe the evil odour and taſte would alſo be precipitated.

The ſame may be done in all Waters, how naſty and muddy ſoever, and not only in Waters, but alſo in all potable Liquors, as Wine and Beer, although the Wine were red, ſeeing that the precipitation caſteth to the bottom all muddineſs, colour, and ſtink. And hence not only thoſe Liquors, which are changed red by corruption, or other accident, but alſo Cryſtals, which are red by nature, may be reduced to a perſpicuous clarity; which is a thing very profitable for Vintners; for otherwiſe the Sea-waters become ſweet when they are carried far through common ſand, which imbibeth their ſalt; for thoſe two have a mutual communion and communication, ſeeing that both are generated of Water; hence alſo, by the fire, they are reſolved into a dry Water, or pellucid Glaſs. Whence any man knowing in the nature of things, may apprehend, that this precipitation of Sea-water is built upon a foundation agreeable to Nature.

My *Alexipharmac*, or Mineral-Electuary, before mentioned, as alſo the Spirit and Cryſtals of Salt, may be adminiſtred, as well at Land as on Sea, againſt the *Scurvy*, *Fevers*, and other Diſeaſes.

And although in the *Second Part of my* Pharmacop. I have already deſcribed a certain Mineral Remedy, under the Title of a *Panacea*, and commended it againſt all Diſeaſes, by which admirable Cures are e'ry where done, yet I prefer my Mineral Electuary before that, becauſe it is more accommodated to uſe, ſeeing that when need requires, it may be taken out of a Box with a Knife only; neither is there need of any Vehicle, as Wine, Beer, or others, which are neceſſary to be uſed with the *Panacea*; neither is there need of weighing it, but may be proportioned by the Eye, according to the age and ſtrength of the ſick. Thoſe who are of full age and ſtrength, may take as much of the Electuary upon a faſting ſtomach as will equal the magnitude of a Peaſe, and faſt ſome hours after it, if time and opportunity permit; alſo let the Patient avoid the cold Air, and the heat of the Sun in hot ſeaſons. It is to be taken twice, four times, or oftner, in a week, according to the neceſſity of the ſick, to which it muſt alſo be proportioned by encreaſing or diminiſhing the Doſe; for if one grain ſhould not work, the Patient may take two, aſcending to 3 or 4, if need be. When a ſmall Doſe is adminiſtred, it works inſenſibly; if a little more, then it worketh by ſtool, and ſometimes by vomit, when it findeth diſeaſie matter in the ſtomach; if it findeth depraved ſalt humours, it caſteth them out by ſweat, ſpitting, or urine, and throughly purgeth the body from every evil. In brief, I ſay, it greatly purifieth the Blood, openeth all obſtructions of the internal principal members, as the *Liver*, *Spleen*, and *Lungs*, beyond all *Phlegmagogues*: It hindereth the growth of all *Apoſtemations* both within and without the body; it conſumeth *Fluxes* and *Catarrhs*, which fall upon the Eyes, Ears, and Teeth; it exterminateth the venereal *Pox* in a ſhort time; it alſo cureth the *Dropſie*, *Leproſie*, *Gout*, and *Falling-ſickneſs*, both in old and young; expelleth the *Stone* both of the *Kidneys* and *Bladder*; cureth all ſorts of *Fevers*; and laſtly, it healeth all inward and outward *Wounds* and *Ulcers*, being taken inwardly, and a due Diet obſerved.

This is a ſafe and approved Medicine in the cure of all curable diſeaſes, nor doth it fail to help in inveterate affects, *viz.* when a diſeaſe hath been long growing, and is now firmly rooted and fixed, that it cannot be totally expelled, as the *Gout* and *Stone*, yet then this Medicine mitigateth the pain, and maketh the Fits ſlower and more tolerable, and ſuffereth not the *Diſeaſe* to encreaſe, but to be more and more abated and diminiſhed. It cures all *Scabs* and *Ringworms*, or *Tetters*, proceeding from an impure Blood and Liver, only by taking it inwardly, without any outward unctions. What ſhall I ſay more? This Medicine cannot be ſufficiently praiſed, ſeeing that it operateth univerſally againſt all the diſeaſes both of Men and Beaſts: But I muſt forbear, for if I ſhould ſhew all its Virtues, this Treatiſe would ſwell to too great a bulk.

In *Maritime* Towns, and other places where the *Scurvy* is regnant, a better Medicine than this cannot be found, for it removeth all pravity of Humours, from which ſuch diſeaſes proceed; it preſerveth from the *Plague*, and other Contagions, and happily cureth their Infections; it ſtrengtheneth the Memory, Heart, and Brain; preſerveth from the *Palſie* and its Concomitants: In time it reſtoreth thoſe who have their Members contracted, and their Nerves repreſſed and immovable, after the being anointed with Mercury, for the cure of the *Pox*. He that will take it every week or once in 3 or 4 weeks as a preſervative, ſhall not have the *Tooth-ach*, nor ſhall his Ears be troubled with ringing or other noiſes, nor ſhall his Eyes be troubled with ſharp Rheums; but by the benefit of this, thoſe continual inveterate Corroders of the Body, *Catarrh*, *Fiſtula*, *Cancer*, and other almoſt incurable ſymptoms, are throughly cured.

Hence both Rich and Poor, and thoſe eſpecially who go long Voyages to Sea, and want Phyſicians, ought to eſteem this *Alexipharmac*, and provide themſelves with it againſt a time of neceſſity. If any man carries with him half an ounce of it, it will be ſufficient for preſervation and curation for more than a year, in many diſeaſes. If a Ship going to the *Eaſt* or *Weſt In-*

dies, carry with them half a pound of it, they may ſave the Lives of many men; one of which is of ten times more value than the price of the Medicine, by help of which the lives and health of many Hundreds of Men may be preſerved, and being ſick, may be reduced to their former health.

Now it is farther neceſſary to deſcribe the Virtues which the Spirit of Salt ſheweth on Shore; for that which is profitable to the ſick on ſhipboard, is not hurtful for thoſe who dwell at Land: For this ſpirit may be uſed in all Houſes in their uſual drink, as Beer or Wine, eſpecially in theſe moiſt Regions, where the Scurvy commonly reigneth; ſo that there is ſcarcely an Houſe to be found, in which there is not one at the leaſt infected with this Diſeaſe; for the drink is hereby made clear, ſo that it well dilateth the Urinary paſſages, moreover hindereth the growing of the ſtone in the Kidnys and Bladder; it alſo gives a pleaſant taſte to the Wine, removeth its ſuperfluous Tartar and precipitateth it to the bottom, ſo that *Spaniſh* and *French* Wine acquire a clearneſs like to *Rheniſh* wine. In Summer time, after Liquors have once wrought, it ſuffereth them not to fret, grow mucous, or work again, but keepeth them from many Accidents. *French* Wines, as ſold in many places, have neither odour nor taſte, but good Wine is endowed both with a Vinous reliſh, and a grateful odour; and when theſe are wanting, the name agrees not with the thing. But the Spirit of Salt, with the Eſſence of Wine, conciliates to *French* wine the ſmell, taſte, and colour of *Rheniſh* wine. Hence alſo being ſo meliorated, it will, like *Rheniſh*, keep many years, which otherwiſe will hardly hold good two years. Moreover, by the ſpirit of ſalt that quality may be taken away from Honey, which renders its taſte ſomewhat ungrateful, and its hidden Impurities may be precipitated, ſo that an excellent wholſom drink may be made of it. Which is a famous Art to be uſed in thoſe places where there is no wine; for when Honey is well depurated, and the unpleaſant taſte taken from it, it becomes as a comforting Balſam to Man; as that old Souldier had experienced, whom *Alexander* asked what he had uſed to prolong his Life to ſo great an Age, he anſwered, That inwardly he had uſed Honey, and outwardly Oil. And it is evident to many, that there is a great virtue in Honey, but by reaſon of the unpleaſant taſte, it is loathed; which yet is removed by the ſpirit of ſalt, ſo that a drink prepared of ſuch pure Honey, is as wholſom as the beſt wine: which hath alſo this benefit, that every Houſekeeper may have this drink at his Table, at any time of the year. This honied Nectar alſo holdeth good many years, after the manner of the beſt *Rheniſh* wine, and is made for a ſmall charge, and will be a great comfort to thoſe who are not able to go to the price of wine. Moreover, every one may make his own drink as ſtrong and as ſweet as he pleaſeth; which is the principal head of the Art, to take away the ungrateful taſte from the Honey, which being removed by the ſpirit of ſalt, the drink will become clear, to which you may add a little *French* or *Rheniſh* wine for taſte ſake. You may thence alſo make good Beer, which will hold its goodneſs 10 or 20 years, or more, *viz.* if inſtead of common water you take the water of Hops, to diſſolve the purified Honey, to which (if you pleaſe) you may give divers taſts, by putting into it divers Herbs, as is wont to be done in wine and beer. But this you are eſpecially to regard, That for this buſineſs you do not uſe unrectified ſpirit of ſalt, for ſuch would ſpoil the taſte, and corrupt the drink, but alwaies take that which is well rectify'd, which I have ſufficiently taught the manner of doing of, both in this Treatiſe, and divers other places of my Writings.

NB. There is no need to put the ſpirit into a Veſſel of Wine or Beer, but it ſufficeth to keep it in a ſmall glaſs, and as often as you have occaſion to put ſome drops of it into a Bottle of Wine or Beer, and ſo to drink of it. Every one therefore may make his drink as he will, by putting in more or leſs of the ſpirit, according to his Palate; which doth not only ſerve to make the wine and beer clear and diuretick, but may alſo be uſed in Fountain-water, in hot weather, for the allaying of wine: For if ſome drops of it be put into a bottle of water, it giveth it a grateful acidity, not much unlike to the natural Mineral acid waters, and in hot weather allayeth the over-great heat of the Blood, and quencheth Thirſt, ſo that there is no need of burdening the ſtomach with much wine or beer. Alſo all thoſe drinks, as wine, beer, and water, which are mingled with the well-rectified ſpirit of ſalt, are far wholſomer than other ordinary drinks. If a little pure Steel be diſſolved in ſpirit of Salt, and then put to fair water, it will have almoſt the ſame taſte with the *Spaw*-water, and if ſome quantity of it be drank, it looſeth the belly, and evacuateth black Excrements, whence a man grows lively and vigorous, as if he had drank of the *Spaw*-waters.

And this benefit may accrue by it to all Travellers, who carrying with them a little ſpirit of ſalt in a glaſs, may at all times, and in all places, correct and amend their beer or wine in their Tuns, and give it a better reliſh: But becauſe this ſpirit is more liable to be loſt in a liquid form by any accident befalling the glaſs, therefore being coagulated into a dry form, it may be more commodiouſly carried about in a Paper or Box, of which the magnitude of a ſmall Peaſe drank in one cup of water, quencheth Thirſt better than a great quantity of water alone. This ſpirit or ſalt will be ſerviceable to men of all ſorts, but to none more than to Seamen or Souldiers, in war-like expeditions, of which ſometimes more die through want of water, than by the ſword, who alſo for the moſt part contract their Diſeaſes from the filths in Ships, which might eaſily be prevented. What will it profit a Captain of a Man of War, or the Commander of a Merchant-ſhip, to have many men for his defence and ſervice, if they are diſabled by a Diſeaſe? Were it not then better to uſe all diligence to preſerve their health, and to reſtore it when loſt? Which may be done with ſmall Labour and Coſt. A General brings an Army ſome time into the Field, of 10, 20, or 30 Thouſand Men, and ſeeing that thoſe obſerve no due order in eating and drinking, and being deſtitute of Medicines, if the *Plague*, *Fever*, or *Bloody-Flux* comes among them, they drop off one after another like Flies in Winter; when notwithſtanding they might be ſuccoured and helped in thoſe Diſeaſes by my Electuary, [*This Electuary I think to be the* Panacea Antimonij *made up with Sugar.*] Salt of Salt, or Spirit of Salt, inſpiſſated or thickened with Sugar. The ſpirit of ſalt hath alwaies been highly eſteemed, both by ancient & modern Phyſicians, for its great virtues which it ſheweth both inwardly & outwardly; beſides which, it is of great uſe in other Arts, as I have ſhewed in the *firſt and ſecond Part of my Furnaces*. And that the Reader may ſee that I am not ſingular in what I have aſcribed to the ſpirit of ſalt, I will here ſet down the Experience of that no leſs learned than famous Phyſician *Conradus Kunrath*, of the ſpirit of ſalt, as he hath expreſſed it in his *Medulla Deſtillatoria*, printed at *Hamburgh*, *Anno* 1638. in theſe words, *Part* 1. *pag.* 59.

The

The Great and Effectual Operations which are attributed to the Spirit or Oil of *SALT.*

THE Spirit or Oil of Salt is not of so acrimonious a taste, as Salt commonly is: Nor hath it so great an acidity as the Spirit of Vitriol, but it tasteth almost like the juice of wild Apples, with somewhat of sweetness intermixt. It discusseth, dissolveth, consumeth, and dryeth, yet it doth not heat too much, but hath a temperate nature, mitigating and comforting the natural heat, which it also encreaseth, and dispelleth all things contrary to Nature, preserveth the state of sound humours unhurt, especially profitable for those who are phlegmatick, whose viscous Saburra *of humidities it consumeth, taketh away* Catarrhs *which fall from the Head, and preserveth from all Diseases which arise from a noxious Pituity, Mucor, and Fluxes. Yea, those who use labour and study, shall perceive their Strength to be restored by it, and as it were renewed.*

Experience, the Mistris of things, witnesseth, That it is a present Remedy against the Falling-sickness, *being administred in good* Aqua-vitæ: *Against the* Apoplexy, Palsie, *or* loss of Speech; *as also the trembling and beating of the Heart, and all dejections of Mind; as also in the time of the* Plague, *or in any infectious Air, it may be administred with profit, by mixing half an ounce of the Spirit or Oil of Salt with two ounces of the Juice of Violets, and as much of the Electuary of Juniper-berries, in a Stone or Glass Mortar, and the Patient taking the quantity of a Filberd in the morning upon an empty stomach.*

This Compound-Medicine being given to Women with Child, facilitateth the Birth, and is highly profitable against various Symptoms of Women in Child-bed, without any danger. If any desire to preserve their native heat, let them often use this Alexipharmack.

Whoever is burdened with superfluous moisture, let him take this Spirit or Oil of Salt daily, in Wine or some other Vehicle.

In Coldness, and continual Fluxes, which stop up the Breast, it conduceth much, and taketh away inveterate Coughs and grievous Asthma's, *which are stirred up by those Fluxes. It dissolveth, consumeth, and dissipateth depraved humours, collected and indurated in the stomach; and although of it self it communicateth little nourishment, yet it excites the Stomach to a good Appetite, and disposeth the Meat to a good digestion and passage through the body.*

It helpeth in the Tartarous and indurated Obstructions of the Liver and Spleen, *which it openeth and relieveth, and hence removeth and taketh away the* Jaundice, Dropsie, Hypocondriack Melancholy, *and pains and affects of the* Ribs *and* Viscera, *and also whatsoever ariseth from Wind and Flatulency, and other symptomes proceeding from the said causes, it especially absumeth the* Anasarca, *or Water under the skin, and throughly removeth watery Tumours in the Genital Members or Legs, which for the most part happen to those who are Hydropical, Phthisical, or labour under a Distemper of the Liver. It also taketh away the great Thirst in those, which otherwise in this kind of diseases doth not lightly afflict, so that the Patient shall have no desire of drinking, but may remain some daies without. The same is also a Remedy against all putrid* Fevers.

In tormenting Pains of the Belly, and Cholick, *which are excited by the viscosity of humours, or intemperature of flatulency, or force of cold, and a dense and tough Phlegm driven into the Intestines; this Spirit resolveth and consumeth, and so openeth the stopt passages of the Bowels, and looseneth the Belly, that it easeth the Iliack pains, whether it be taken at the mouth, or administred Clysterwise. In the* Lientery, Dysentery, *or* Hæmorrhage, *it is to be given in Clysters; in like manner in* Nephritick *Diseases, and the dolorous* Stone in the Bladder, *which it dispelleth and exterminateth.*

In Ruptures, *as the* Hernia *and* Enterocele, *let some drops be given daily in good Wine; let the Tumour of the* Scrotum *be also often anointed with this Spirit or Oil, and cherished by a fit Truss, or some other bandage, and in a few daies the sick will recover his former health.*

It killeth all Worms *in the Body, casteth them out, and prohibits their breeding again.*

It is a most effectual preservative against the contagion of the Plague; *and also is very conducible to those who are already infected. It also wonderfully profiteth such as have eaten Poisonous Mushrooms or Opium, as also those who are hurt by Serpents, Vipers, Spiders, and the like venomous Insects, it is accommodated both to inward and outward use, because it consumeth virulent humidities. For the stinging of Wasps and Hornets, it is to be applied topically.*

For fat Women, and those who are troubled with impurities of the Matrix, from a superfluous phlegmatick humour, it is very profitable; for by the benefit of it, every redundancy and incommodity of Phlegm is purified, consumed, and dried up, so that the seed may more easily rest in the Womb, and fertility be greatly promoted.

In protuberant Excrescencies of the Eyes, Films, Cataracts, Blisters, Pustles, *or* Spots, Dimness *or* Darkness of sight, *it is to be used in a good Collyry, or other commodious Vehicle. In* Blows, Bruises, *or* Falls, *when the Blood is congealed, (which we call black and blue) in the Eyes or Face, let a bit of a Sponge or Lint be wetted with the Spirit or Oil of Salt, and applied to the place affected; or else dissolve in the same a little red Myrrh, and with the Dissolution mix a little Honey, and anoint with it. It driveth away noise and pain of the Ears, also when the Ears send forth an ulcerous and purulent matter, the same Medicine may be administred with an happy success. And in these Symptoms it is to be mixed with Wine-Vinegar, and dropped into the Ears, and rubbed upon the diseased parts.*

In the Thrush, *and other sore mouths of sucking Children, also in the glandular or kernelly Swellings of the Neck, foulness of the Tongue, swelled and rotten Gums,* Scurvy *in the Mouth,* Tooth-ach, *superfluous humours and filths adhering to the Teeth and Gums, this Spirit or Oil of Salt is an excellent Remedy; as also in preserving from those Evils, it is to be conjoined with clarified Honey, and the Mouth, or parts affected in it, to be anointed therewith. Against the evil Affects and Ulcers of Womens Breasts, some linen rags are to be humected with the Spirit or Oil of Salt, and they will be quickly healed. The moist* Itch, Tetters, Ringworms, *and other contagious Affects of the Skin, are happily cured by both the inward and outward use of this Spirit.* Ulcers *and fungous* Tumours *in the Venereal Disease, or others, if we would bring them to a suppuration, the Oil of Salt will effect it, being applied either alone, or mixed with other convenient Remedies. For the healing of venomous Ulcers, which pierce the Bone it self, as also all virulent Apostems, the Spirit or Oil of Salt is to be mixed with White-wine, and Barley-Flour, into the consistency of a Plaster, which is to be applied to the Sore.*

Also in cancerous, eating, and spreading Ulcers, it is very profitable, being mixed with the juice of Rhue, and aptly applied.

That I may summarily express its use both inwardly and outwardly, it resisteth all fluid and corroding Vices, and layeth the foundation of their Cure. In luxated, shortened, or contracted members and joints, it affordeth

present

preſent help, being uſed alone, or joined with fit fomentations or Epithems.

In the taking away of Warts, *this Spirit is to be mixed with the juice of Marigolds, and applied to them: It alſo taketh away Corns, if after they are ſoftened with warm water, they be well cut and anointed with this Oil. In the* Eryſipelas, *St.* Anthony's *Fire, this being mixed with Elder-Vinegar, and applied, is of great virtue.*

The Hands or Feet being corrupted or chapt by Cold, are recovered by the benefit of this Medicine. This Spirit or Oil greatly conduceth to help the wearineſs and weakneſs of the Feet and other Members, reſtoring to them their ſtrength and vigour, if they be well bathed therewith before the fire.

Moreover, in the dolorous Gout *it is a famous Remedy, and a profitable* Anodine *for allaying the pain, if beſides its internal uſe it be alſo applied topically: For to this our Medicine are to be joined Oil of Turpentine, Oil of Wax, Oil of Camomile, or alſo Oil of Cowſlips, with which the parts affected are to be well anointed. But where the members are contracted by* Fluxions *and* Catarrhs, *fit Fomentations are alſo to be uſed, and beſides our Oil or Spirit, the dulcified Oil of Vitriol, and pure Oil of Turpentine, are to be mixed together, and the parts to be therewith anointed before the fire. And hence the Nerves and Joints are ſo comforted, that they will not ſo eaſily admit ſuch Fluxions again. Alſo if there be* Tophes *or* Nodes *in the Joints, they will be diſcuſſed beyond belief; being duly anointed with this Oil, mixed with the dulcified Oil of Vitriol.*

It is alſo uſed with great profit both inwardly and outwardly, againſt the Cramp *and* Convulſion *of the Nerves by Cold.*

In external Wounds and Symptoms there often happens a Putretude, and alſo proud Fleſh ſometimes ſtarteth up, and cauſeth great pain. Theſe Protuberances being anointed with this Oil or Spirit, are preſently diſſolved and conſumed, and alſo preſerved from future corruptions.

In brief, this is a moſt excellent Medicine, overcoming many Diſeaſes. Moreover, the Reader is to know, that this Spirit or Oil of Salt, (beſides thoſe Virtues which I have declared) if it be diligently prepared, and rightly preſcribed, may be uſed for the preparing of many excellent and precious things in the Chymical Art; for it diſſolveth Gold, Gemms, and other Stones, Pearls, Corals, &c. ſo that they are reduced into excellent Medicines, in a liquid or potable form, highly uſeful for Mankind: But how thoſe Proceſſes are to be inſtituted, I ſhall here pretermit, But he that hath drawn a good foundation of working from that information which my Medulla Deſtillatoria *hath faithfully propounded, let him weigh the matter with an accurate mind, and put his hand to the Work, there is nothing in it ſo tedious, but he will eaſily conceive; moreover, let him aſſociate himſelf with honeſt, ſincere, and skilful Artiſts, and take their counſel, then he will find out many Secrets of Nature, and ſingular Arcana's, and will ſee that his care and diligence hath not been in vain: Then let him uſe that Experience to the Glory of God, and the help of his needy Neighbour.*

The Virtues or moſt efficacious Operations of the *Spirit* or *Oil of Salt*, in which Gold is rightly diſſolved, according to Art; or, when it ſhall be made an *Aurum Potabile*.

PHiloſophers and Phyſicians, endowed with the great Exerciſe and Knowledge of Things, have attributed to the Spirit or Oil of Salt, in which Gold is rightly diſſolved, or the Aurum Potabile *made with it, very great operations in the body of Man, inaſmuch as in all Diſeaſes and Infirmities, of what name ſoever, it giveth preſent help, and in all dejections of the vital ſpirit, although they tend to the fatal period, it giveth ſuch relief, that life and vigour may be yet ſomewhat farther protracted, if two, three, or four drops be adminiſtred as occaſion ſhall ſerve in a good* Aqua vitæ *or Cordial Water. In like manner, if three drops be adminiſtred once a week in generous Wine, or* Aqua vitæ, *or other fit Vehicle, it renovateth a man, makes him youthful, changeth gray Hairs, produceth new Nails, and Skin, preſerveth from various and diverſe ſymptoms of Diſeaſes, and preſerveth the body in ſuch a ſtate, even to the prefixed hour of the Divine appointment.*

Theſe are the very words of that famous Philoſopher and Chymical Phyſician *Conradus Kunrath*, in his *Medulla Deſtillatoria*; as the Reader may there ſee.

Now any may eaſily conjecture, that although this learned man had found out many things, yet that he knew not all, but what was known to him, that he divulged. But that as yet more might be done by that Spirit or Oil of Salt, than what he had ſet down, eaſily appeareth from that which he ſheweth at the end, concerning the Oil or Liquor of Gold, prepared by the Spirit of Salt, which words are Truth it ſelf, and much more may be done by the benefit of that ſolution. He hath written what Experience hath taught him, the reſt he hath left to the ſtudy and ſearches of others.

Seeing therefore that I alſo (not to ſpeak boaſtingly) have often handled Furnaces and Coals, and among others, have found this Liquor of Gold or *Aurum Potabile*, made with Oil of Salt, to be of great virtue, and knowing its great uſe, power, and virtue by experience, I will deſcribe it in an open ſtile, leſt ſo noble a Medicine ſhould be buried. Such a Liquor of Gold as is here mentioned, is compounded of the pureſt Sol, and the moſt highly rectified and again concentrated Spirit of Salt: The Sol is to be firſt melted, and throughly purged with Antimony, then to be diſſolved in *Aqua Regia*, and precipitated with ☿, to be edulcorated and brought into a ſubtile Calx, which muſt be heat red-hot (to free it from the ☿) and then diſſolved in ſtrong and well-prepared Oil of Salt; being diſſolved, abſtract part of the ſpirit of ſalt from it, and a very yellow Liquor of Gold will remain at the bottom, which yet is not, fit for uſe alone, ſeeing that the Oil of Salt containeth too much Acrimony; therefore a drop of it is to be mixed with a ſpoonful of Beer, Wine, or warm Broth, before it be adminiſtred to weaken the ſpirit of ſalt; but if any deſire to have it ſweeter, inſtead of Wine, Beer, or Broth, it may be mixed with melted Sugar, or ſyrup of Roſes. The Doſe for a man of ripe age, is two or three drops, which if he ſhall perceive not to operate ſufficiently, he may encreaſe to three or four drops, ſo long, till he ſhall find an evident operation, which appearing, let him encreaſe the Doſe no longer, but rather diminiſh it a drop; and when the Oil of Gold rightly performeth its operations, theſe ſigns will appear: In the firſt uſe, a certain loathing or nauſeouſneſs of the ſtomach, will be perceived, when the Oil of Gold findeth there a vitious pituity, and endeavouring to expel it, driveth it downwards, and ejecteth it by ſtool. 2. The Excrements are as black as a Coal, and during the uſe of the Medicine, the ſick maketh a diſcharge by ſtools at leaſt twice, ſometimes three or four times, without any impediment or ſence of neceſſity, as is wont to be in the working of Purges. The Urine will alſo be thick and turbid, becauſe the Medicine diſſolveth the Tartar and Phlegm in the Reins and Bladder, and by de-

degrees expelleth it. NB. That by the black Excrements, it is manifeſt, that Gold may be radically diſſolved in the ſtomach of a Man, which ſome think to be impoſſible. The humane ſtomach hath a greater power in the deſtruction of things than the ſtrongeſt fire, as may be here ſeen by the Gold: Yea, all things which are eaten or drank, in the ſpace of 24 hours, it throughly diſſolveth and tranſmuteth into a new form of Excrements.

If the ſtomach of a man can effect ſuch things, why not Art alſo? Yea, hence it is expreſly proved, that the colours of Gold, at length, when it is radically diſſolved and deſtroyed, do appear, and may be known, ſeeing that in Colours Blackneſs hath as it were the firſt and chief place, and containeth all others hidden and concentrated under it.

NB. That theſe black Excrements ſhould not be caſt away, but the radically-diſſolved Gold ought to be ſeparated from them, with which perhaps ſome great thing may be effected.

I ſome time ſince adminiſtred this Oil of Gold, for eight or ten daies ſucceſſively, to a certain Infant, for the freeing his body from Mercury, which had been imprudently given him for the Worms; I ordered the Excrements to be ſaved, for ſome Experiment, which nevertheleſs, becauſe they ſtood long and bred Worms, I could not uſe, but commanded them to be put to the Roots of a young Vine, which had not yet born Grapes, being but of two years growth, which produced a ſmall Grape with large ſtones, which had golden ſpots like Stars, admirable to behold. This Example is worthy of a profound conſideration. It alſo ſeems to me, that the Urine of thoſe who continually uſe the aforeſaid golden Liquor ſhould be auriferous, although it appear not in the colour. The thing is out of doubt, ſeeing that men, in the uſe of the ſaid Medicine, attract only a certain hidden virtue from the Gold, and again ſend the reſt forth of the body, that that Gold is better than other common Gold: The Benignity of the Divine Being hath diſpoſed and ordained every thing in the World for the beſt.

Seeing that in the Stomach of Man or Beaſt the Food is deſtroyed and putrefied, Nature taking a little from it only for nouriſhment ſake, caſteth out the reſt by ſiege, which yet is not of ſo abject a condition, as to want its virtues? for if theſe Excrements be mixed with any Earth, moiſtened with Rain-water, and expoſed to the open Air, there will thence ſpring forth divers Herbs, without the addition of any ſeed; but if the ſeed of any Herb be adjoined, then is alſo brought forth fruit of the ſame ſubſtance and quality; ſo that theſe Excrements may degenerate, and be converted into whatſoever Fruits we will: From which Fountain the multiplication of Herbs and Metals may perhaps take its original. Therefore it is neceſſary, that Putrefaction ſhould go before Multiplication; which our Saviour himſelf told his Diſciples, ſaying, *Except a grain of Wheat ſhall fall into the Earth, and die, it remaineth alone; but if it die, it bringeth forth much fruit.* The Axiom of Philoſophers is, *Where Nature endeth, and leaveth the Work imperfect, there Art ought to begin.* But the manner of proceeding farther they have involved in ſilence. Nature from the beginning hath ſublimed a Mineral *Ens*, or firſt matter of Metals, as much as it could, and brought it to the royal ſeat, or higheſt perfection: Art hath deſtroyed the moſt perfect body of Gold by corroſives, and being deſtroyed, hath again diſſolved it in the body of Man: But if any know the manner of proceeding farther with it, he may eaſily reduce that Eſſence of the diſſolved Gold into a better, and multiply it: But I would not have this taken for an Oracle, ſeeing theſe are only my Cogitations.

The Uſe of this Medicine is to be continued till the body is freed from all ill ſymptoms; nor are any other Remedies to be intermixed with it, that its operation may not be hindered: But before this Medicine be adminiſtred, a Doſe or two of my *Panacea* ought to be given, (of which the *Second part* of my *Pharmacop.* treateth) for then its effects are to be admired.

This Oil of Gold, or *Aurum Potabile*, is of much greater force in all thoſe Diſeaſes, in which the ſimple ſpirit of ſalt is conducible, becauſe the Oil of ſalt hath double the ſtrength of the ſpirit, and alſo diffuſeth its virtues much better, by reaſon of the Gold which is anatomized in it; the which, becauſe it is of a hot and dry property, agreeth very well with the Oil of ſalt, whoſe nature is hot and moiſt: and hence it effectually reſiſteth all Corruption which may ariſe in the humane body.

Beſides, the Virtues which the ſpirit of ſalt, and eſpecially the Oil of Gold prepared with it, manifeſt both within and without the body; it is an egregious preſervative againſt Drunkenneſs, which is the root of many Diſeaſes, and the gate by which many evils enter: For ſtrong Wine or ſtale Beer being drank, ſuffer nothing in the ſtomach, becauſe it cannot reſtrain their ſubtile ſpirit, which preſently flieth up into the Head, and diſordereth and confoundeth all the ſenſes. But if in the drinking, a little ſpirit of ſalt be mixed with the Wine, it openeth the Orifice of the ſtomach, and ſuffers not the ſpirits to fly upward, but reſtraineth and bindeth them, alſo mitigateth and repreſſeth that unnatural Thirſt, which otherwiſe the Wine cauſeth in exceſſive drinkings: Nor doth the Wine, which is mixed with ſpirit of ſalt, ſo eaſily hurt the Liver; for as the ſpirit of wine heats and inflames the Liver, ſo the ſpirit of ſalt corrects and cools it. Add that the ſpirit of ſalt permits not the liquor to lie lurking in the ſtomach, but preſently caſteth it out by Urine: and the ſooner the ſuperfluous Wine is caſt out of the body, the leſs hurt it can do. But this is to be underſtood of the ſpirit of ſalt well rectified, and ſubtilly prepared.

Spirit of Salt, a Remedy againſt Drunkenneſs.

In ſhort, I might ſooner want Paper to write, than matter to expreſs what good the ſpirit of ſalt coagulated can do, being taken in drink; I have ſaid enough for the preſent; in my *Vegetable Work* I will more fully diſcourſe of this matter, in which I now acquieſce. Whatſoever I have here written of a Medicine againſt all Sea-faring Diſeaſes, and of the concentration of Corn and Water, againſt Hunger and Thirſt; as alſo of the moſt efficacious uſe of Spirit of Salt, againſt Drunkenneſs, and of the melioration of Wine, Beer, Water, and other Drinks, is built upon the pure foundation of Truth, which Experience it ſelf will ſufficiently teſtifie; with which I put an End to this Diſcourſe.

A True and Perfect

DESCRIPTION

OF

Extracting good TARTAR

FROM THE

Lees of Wine,

And that after a Plentiful Manner.

To the most Reverend PRINCE JOHN PHILIP, *Lord Arch-Bishop of* Moguntina, *High Chancellor of the Empire, and Elector, Bishop of* Herbipolensis, *Duke of* Franconia, *&c. my most Honoured Lord.*

I Presume, you remember (most Reverend and Noble Lord Arch-Bishop and Elector) that about Two Years since, I crav'd Your Lordship's Licence, to Extract *Tartar* from the Lees of Wine; which your Highness was pleased to grant me. From which Work, seeing I have been hitherto hindered by the multiplicity of other business, and the great Waste and Loss which is daily sustain'd in the Electorate of *Moguntina*, and Bishoprick of *Herbipolensis*, proceeding from the Ignorance of the Lees, daily troubles me; I have determined to dedicate this gainful *Extraction of Tartar from the Lees of Wine*, to your Electoral Reverence, under whose Patronage I may be safe, and for this Reason especially, Because none of the Princes of *Germany* enjoy a greater Vintage than your Reverend Highness; to whom not only a good part of the Tract of the *Rhine*, but almost the whole Jurisdiction of *Mæne*, together with *Franconia*, by Divine Providence, belongs; being very fruitful in Wines; where also much Lees are cast away, thro' Ignorance *of the way* of extracting their *Tartar*, for the Good of the Country, from which a good Spirit of Wine might first be drawn by Destillation; the *Tartar* contained in the thick Lees, and remaining in the bottom of the Still, is by all Men cast away, as unprofitable, a few excepted, who with great Labour dry them, and of them make clavellated Ashes: Which Waste or Loss of the Lees, seeing that it makes every year an incredible Loss of *Tartar*, I have thought fit to expose the Knowledge of this Mystery to the Eyes of all Men, for the Good of my Country, by which some being instructed, may set about the *Extraction of Tartar* with great Gain, not doubting, but many, when they shall see this Labour to be profitable to others, undertaking the same, will bring great Profit to their impoverish'd Country.

Therefore I trust, this Little Work will be acceptable to your Reverend Highness. And I pray the Giver of all Good Things, to furnish both your Soul and Body with His Gracious Benefits, who study to be

Your Highness's most

Humble Servant,

J. Rud. Glauber.

A True and Perfect Deſcription of Extracting good TARTAR *from the* LEES *of* WINE, &c.

FIrſt of all, we muſt know what Dregs are, or what is their Eſſence and Nature, how they are reſolv'd into Parts, and the Good ſeparated from the Unuſeful, becauſe without the knowledge of the thing we can't give a right judgment of it, but muſt erre: Therefore it is neceſſary that we know what we have in our hands, that we may the ſafer handle it. For this cauſe I ſhall ſhew the Ignorant what are properly Dregs, and which way the better part may be extracted, that hereafter ſo great a Good may not by ignorant ſluggiſhneſs be laid aſide, but converted to the profit of all.

All thick matter, whether it be of Wine, Beer, Vinegar, or the like, when it has ſtood a little, ſends the earthy, heavy, and more thick part of it, to the bottom, which we call Dregs or Lees, upon which the clearer part flows, to be ſeparated from the impurity, as in the making of common drinks may be ſeen.

There was no uſe of theſe Dregs heretofore, except the making Brandy with e'm, and the reſt to be thrown out of doors, in which was much Virtue, which Men did not think of: But that all things are not unprofitable which the Vulgar pronounce ſo, and that there may be great Virtue in ordinary Matter, I ſhall demonſtrate by this Excrement of Wine.

When the Juice out of the Winepreſs is put into Hogſheads, that there working, the dregs falling to the bottom, the clean Wine may come out, the ſuperfluous Salt of new Wine, while it is ſqueez'd out of the Grapes, with the ſame labour is ſeparated, part ſticking to the ſides of the Veſſel, which we call *Tartar*; but the greater part of this Salt or Tartar, imply'd in the turbid dregs like Sand, ſinks to the bottom. Beſides, this is the property of Salts, that by a hot humour they make a thin water, the humour growing cold, not being able to keep all the diſſolv'd Salt that is compell'd to ſeparate, which excluded the Vehicle, ſeeks a new place. If you put into the Solutions Sticks or Strings, that Cryſtalline Salt, in a cubical or angular figure agreeable to its nature, will ſtick to them; or otherwiſe it cleaves to the ſides of the Veſſel.

'Tis beyond all Controverſie, that the Grape above all Vegetables has much Salt, not ſenſible, unleſs it is fermented with a minute heat, which working by Nature, endeavours a ſeparation, while the purer and more liquid part retains ſo much Salt as the Wine has need of, the thicker Salt being exturbated, part of which incruſtates the ſides of the Veſſel, part of much thickneſs ſticks, and ſubſiding with them, gets the appellation of dregs, from which the vulgar are wont to deſtil a Spirit or Brandy Wine: But theſe dregs are not a uſeleſs matter, as they have been hitherto thought, for much *Tartar* may be extracted out of 'em with little coſt.

But he that ſhall ſearch more narrowly into the thing, will find a way whereby poor and decaying Wine may be made good.

In ſome places, as ſuppoſe in *Franconia*, *Alſatia*, *Auſtria*, and the *Rheniſh Tract*, moſt fruitful for ſtore of wine, theſe lees of wine are made nothing of, but are given to Swine and other Cattel to drink, by which means the Tartar in it ſo purges 'em, that they are ſoon fat; they ſeldom try to draw the ſpirit thence. Otherwhere, where wine is not made, eſpecially where they fetch their wine a great way, they are much eſteemed of, not only becauſe wine may be drawn from 'em, but alſo put in ſmall Hempen ſacks, are preſſed in adapted Preſſes, a good mixt wine flowing thence ſaleable to others; yet this being but a ſmall wine, many have deſtinated it for Vinegar, to which it beſt agrees; but he that knows how to reſtore to it what it loſt in preſſing, may make a palatable ſtrong wine, not inferiour to what it was at firſt: But this Secret belongs to another place, I ſhall here only treat of Vinegar and Spirit of Wine.

In *Holland*, *France*, *Italy*, this preſſing of the dregs and preparation of Vinegar is of frequent uſe, and very profitable to many, who get nothing but what they ſqueeze out of the dregs they have of the Vintners, and convert the Wine into Vinegar; the reſidue of the dregs they put into Barrels, and ſell it to Hatters, which being boil'd in water, they thicken rough Hats with it; for Wool is brought into a little compaſs by hot water, and by how much the hotter that is, the Hats are made the thicker by it: For ſince it is the nature of Tartar to make the water wherein 'tis diluted hotter than fire, and ſince there is much Tartar in the dregs, by virtue of which, water acquires a more intenſe degree of heat, which the ignorant Hatters aſcribe to the limoſity of dregs, rather to be attributed to the inherent Tartar, hence they put ſo much dregs in every pot as they know to be needful to the conſtipation of the wool.

And this is the uſe to which preſt Lees are put, but if they have a greater quantity than the Hatters uſe, ſometimes they are corrupted, part turns to Worms, and afterward to a moſt ſtinking dirt fit for nothing. When they ſell them to the Hatters, then the Vinegar made of the wine preſt out of them, which coſt them little, brings 'em great profit, otherwiſe they would not gain much by their own Art, if they were not eas'd by the Hatters taking the reſidue.

But after what manner Vinegar may be made, I ſhall briefly ſhew: Vinegar-makers diſpoſe many Hogſheads upon Stands a foot high from the ground, under which a pot to receive the Vinegar is ſet, erected in a hot place, the upper head being taken out, about the middle of the Hogſhead they place two pieces of Wood acroſs, ſuſtaining another foraminous bottom, upon which they put the Vinous dregs, filling the Veſſel even to the top, then they cover it with the head or ſome good ſquare Cover, that little Air may enter; when in two or three daies, by putting in your hand, ſufficient heat is perceiv'd, the wine which before was preſt out of the dregs, is to be pour'd to it, ſo that the wine may be above the dregs, ſo the Hogſhead cloſe covered is left, till on the oppoſite row another Hogſhead can be filled with the like dregs and grow hot; then the Wine being drawn out of the firſt hogſhead, is poured into this, till the dregs in the firſt hogſhead begin again to be hot, which are again to be macerated in the firſt Wine. This mutual affuſion and depletion of

of the Wine is to be repeated till a juſt acidity follows, which may be done in the ſpace of two or three weeks, according to the heat of the Air; which will be good and permanent Vinegar, to be kept for ſale in another Hogſhead. Preſently the firſt dregs being hot, freſh wine is to be pour'd to them, doing all things as before, till this wine alſo ſhall become good Vinegar. If you have many Hogſheads, you may make Vinegar all Summer only, but if you will alſo work in Winter, the place may be made hot by the help of a Furnace.

After this manner in *France* and *Holland* many Families are maintain'd and enriched, by the dregs of Wine preſt and converted to Vinegar.

And now I ſhall produce my Invention, a good Gift of God, as I take it, to good men; 'Tis certain, that in Viniferous Countries, where much dregs are bought for a ſmall price, they may obtain a profit to themſelves not to be deſpis'd; for which (next to God) they are beholden to me, who by unwearied toil have found this Science, and let 'em ſhew their gratitude towards Needy Perſons, leſt they incurr the diſpleaſure of God, and ſo turn this Bleſſing into a Curſe.

Firſt of all, let there be a good Preſs, with a long Beam, from which hang weights, let there be put in ſmall bags at leaſt 5 or 6 Firkins of Lees, and them ſoundly preſt.

The wine that comes out by preſſion, you may turn to Vinegar, either by the help of other Lees, or ſome other method; pour as much of the thick in the ſacks with a due proportion of water into a Still, let it not boil in ſtilling, the Head being on, apply the refrigeratory, manage the deſtillation as otherwiſe Spirit of Wine is wont to be drawn, keep the Spirit proceeding thence till there is a good quantity of it, which you ought to rectifie or clarifie by ſeveral deſtillations: (tho this Spirit is not abundant in the dry dregs, yet there is ſufficient to pay for the making of the Vinegar and Tartar) when there comes an inſipid water, take out the fire, open the Pipe or Cock coming from the Still, let the water with the dregs run through the Channel into a great ſack put to the Preſs, when 'tis cloſe ty'd, preſs it, that the moiſt may be ſeparated from the dry: the Liquor cooling in a peculiar Veſſel, and congealed into Tartar, will ſtick to the ſides, the reſt falls down like ſand: Take out the dregs remaining in the ſack, dry them in the heat of the Sun, burn them under a Still as wood, and you will have very ſharp aſhes, commonly called clavellated aſhes, uſeful for *Dyers*, the price of which (at leaſt) exceeds the preſſion and preparation of Tartar. When you have finiſhed one deſtillation with the Preſs, fill the empty Deſtillatory with freſh water and dregs, as before, and while you draw ſpirit thence, preſs the firſt dregs, and continually put the deſtillation to the ſame Preſs, which coming out hot, don't put it to the former, but give proper Veſſels to each deſtillation. The day after, put the firſt water from which the Tartar went to the bottom, to the third deſtillation, inſtead of freſh water, that is, by diſſolving and deſtilling new dregs in it, as I have taught: Let the fæces of the fourth deſtillation be pour'd in the ſecond water, which hath let fall its Tartar, and ſo afterwards, by which Compendium you will make no waſte of Tartar, but what remains in the water, may take encreaſe from the new dregs to which it is pour'd, and it will give its Gain: But if you will, you may animate that acid water from which the Tartar is ſeparated, and with a ſmall charge, by Grain and Fruits of Trees, give it life and ſoul again, that it may again be made Wine, not unlike the firſt preſt from the Lees, after the ſame method it is turn'd into Vinegar, (becauſe 'tis already ſharp, the life or ſoul only that preſerve from Corruption being wanting) the way of proceeding will bring great Gain to him that underſtands it.

If you know not the adminiſtration, do as I have order'd, and inſtead of common water, diſſolve the hard dregs in this acid, and you will have good Tartar; but that languid water may alſo be adhibited to other uſes, which I ſhall ſet down in the end of this Book: This do, that the fæces be not burnt by too great a fire, nor the ſpirit ſtink, and the ſtill be ſpoil'd, which you may prevent if you anoint the bottom with Lard before you put in the heavy water, and draw off the ſpirit. Here I might ſhew a Compendium whereby the dregs, tho' dry, ſhould not be in danger of burning, but it would be long and tedious to the Reader. But if you mind diligently what I have written, you will get enough.

When you have gotten a good quantity of Tartar from the Lees, not neat to outward appearance, but very like dirt or ſand, purge it yet more, that either it may be reduc'd to a very fair Cryſtal, or till it cleaves in great Fragments to the ſides of the Veſſel, which you may effect by the following Way. Fill a *Veſica* with limpid water, almoſt to the top, put a little granulated Tartar into that water, ſoundly boiling to diſſolve, putting a ſtick to the bottom, you may ſee when it is diſſolv'd, add more by degrees, till no more will melt in the water, which you may thus find out: Fill a Pewter Saucer with this Liquor, if it contracts a little skin or cream, it ſhews that it has enough Tartar to produce Cryſtals, but if not, add more Tartar, till you ſee this ſign in the pot; while it boils, add the ſcum taken off with a perforated Braſs Ladle, to the dry Lees, which by reaſon of the Tartar adhering, when burnt, conduces to the clavellated aſhes; when the boiling has drawn Tartar enough, let it be let out thro' the Pipe of the Still into a clean Receiver, where while the water cools, the Cryſtals will incruſtate on the ſides; apply the reſt of the water to the ſame uſes, you will do better; if you ſhall change it into Wine or Vinegar, let the Cryſtalline roughneſs remain in the Veſſel, for if you add a new boiling, greater and fairer ſorts of Cryſtals will be made, becauſe by how much the thicker this Tartar is, ſo much the dearer 'tis held; and thus you may conciliate thickneſs to your Cryſtals. When it ſhall ſeem enough, pour the reſt of the Solutions into another Veſſel, in which the firſt Tartar has concreted, let it dry of it ſelf, afterwards ſtrike the ſides of it with a great blow, and great Fragments of Tartar will fall down, which you may ſell for profit, put the veſſel to the ſame labour again.

This is the exact deſcription of producing good Vinegar and Tartar neceſſary for many Arts, from the baſeſt dregs, and of juſtly getting much profit with little pains.

Now I proceed to make the Wine which ſome call Aduſt, or Spirit of Wine, of the Lees of Wine, without any Coſts.

After the defecated Wine is pour'd out, put the fæces into the Still, add as much water as the diſſolution of the inherent Tartar requires, kindle a fire, ſtir it at the bottom with a wooden Ladle, that it may not burn to; when you can no longer bear the heat of the water with your hand, and the ſpirits break forth, take out the Ladle, put on the Head, and deſtil till you perceive no ſpirit, but meer Phlegm; the remaining Liquor draw out into a ſack cloſe ty'd, work it in the Preſs, and you will have ſpirit of wine by deſtillation, and alſo Tartar by expreſſion, concretion, cryſtaliſation,

tion, with double encreaſe; as I ſhall ſhew more clearly by and by, that before you begin to work, you may be ſure, how much you hope to gain thereby, leſt you labour in vain, maturely conſult that you may diſcern by a premis'd computation what is to be done.

For inſtance, If five Firkins of Lees coſt half a Doller each, five Firkins will yield two R. Dollers and an half; from theſe I preſs out two Firkins of Wine, two Firkins remain in the ſacks, one Firkin is ſuppoſed to waſte in the transfuſion, when yet a Veſſel ſeldom ſoaks up four quarts: I turn the two Firkins of Wine into Vinegar; the two Firkins of thick Lees being diluted with Water, I draw Spirit of Wine, and preſs out the Tartar; this Wine drawn by the Fire, together with the dregs left of the Tartar, being reduced by burning into clavellated aſhes, do equal the Charge of making the Vinegar & Tartar, but two firkins of dregs afford from 40 to 100 pounds of Tartar, as the Wine is ſweeter or more acid, (tho' the harſh affords more Tartar than the ſweet) but if they yield but 40 pounds, this Tartar refunds the price of the Lees; the ſpirituous Liquor and clavellated Aſhes, recompence the Wood, and the two Firkins of preſſed wine you have over-plus to be turn'd into Vinegar.

Or if you buy two Firkins of Lees for one R. Doller; firſt you may draw off the ſpirit; after that, you may preſs out about ten pounds of Tartar, both together ſaleable at one Doller, as much as the Lees coſt; all the Liquor of the Spirit will be clear gain, by an egregious ſhort labour to grow Rich. Suppoſe a Firkin to coſt a Doller, and to yield not above 9 pound of Tartar, each of which is worth two Bazeins; tho' ſome Lees are better than others, yet ſeldom any are found ſo poor, that do not afford their value in Tartar; even the *Rheniſh*, *Franconian*, and *Auſtrian*, one Firkin yielding one Doller, oftentimes affords fifty pound of Tartar, or more. Beſides, we muſt note, if the Lees are dear, Tartar and burning ſpirit of wine can't be cheap, becauſe the dearneſs of them depends on the ſcarcity of wine: But if the Lees are dear, the the Vinegar, Spirit, and Tartar cheap, (which yet was never known) ſo that the quantity of Tartar will not yield the price of the Lees; neither alſo can you have the Vinegar and ſpirituous wine *gratis*; yet you ſhall have this profit above others, living on Vinegar and burning wines only, that the Tartar and clavellated Aſhes collected from the refuſe of the eliquated wine, by others rejected, you may get an help, that you may ſell the ſpirit of wine, that coſt you little, for more than otherwiſe. If therefore he gains by only preſſing wine, or deſtillation of the ſpirit, how much rather you that acquire both Vinegar and ſpirit of wine from thoſe dregs for a gratuity?

One thing more I add for confirmation: If 8 Firkins of Lees, that coſt 4 Dollers, make 4 or 6 Firkins of vinegar, or one of burning wine or brandy, that vinegar or brandy yields 10 or 12 R. Dollers: The preſt or deſtilled dregs, if they give fifty or ſixty pound of Tartar, they equallize the firſt price of the dregs; but if there be a leſs quantity of Tartar, the vinegar or ſpirit will ſtand you in but little, which being made better, or ſold cheaper than ordinary, you (the ſeller) will allure buyers before others.

Some man may ſay, the Art indeed has been unheard of, and is gainful, but does not agree with every age and condition; for all don't underſtand Merchandiſing, but rather ſome abhor it, ſeeing the Scriptures compleatly teſtifie, that the fraud between the buyer and ſeller ſticks as faſt as a Pin between the ſtones of a wall; to whom I anſwer, that to every Chriſtian an honeſt Occupation is permitted by Divine Providence for the ſuſtentation of him and his, but he need not burden his Neighbour in any caſe. For that it is lawful to endeavour a livelihood this way, or that, is atteſted to by a laudable example, in both the Old and New Teſtament.

This is the true way of preſſing wine from Lees, and reducing it to Vinegar, and drawing out Brandy and Tartar, and incinerating the refuſe.

It remains that I ſet down the uſes to which the reſt of the water from the Tartar may be adhibited with profit; but we muſt know by the way, that the ſourneſs in that water is nothing but Tartar diſſolved, which does not take a Cryſtalline form at the ſides of the Veſſel: therefore this acid water performs whatſoever is effected by Tartar diluted in common water.

Since there is no man but knows how to diſſolve Copper in tartariſed water, without the help of ſalt, as in the dealbation of ordinary Coins and Silver Veſſels among the ſilver-workers may be ſeen, who take away the Copper ſticking in the ſuperficies of money or ſilver-veſſels by boiling, the ſilver appearing as if it had nothing of copper mix'd with it: to this work the aforeſaid water may be very profitably applied; and ſeeing that a great quantity of it remains in the working of the Lees, it can ſcarcely be better imploy'd than by the following method. If the viler Marcaſites of Copper, every where obvious, and which cannot otherwiſe be melted with profit, as alſo the *Scoria* or droſs of Copper, which is thrown away, be boil'd in this water, it will attract the Copper to it ſelf; caſt in Filings of Iron, and they will be exalted into Copper, and the extracted Copper will be precipitated from the water by the addition of the Iron. This gradation of Iron into Copper being done, which in outward appearance will be like a dirty Mudd, it is to be edulcorated with clear water, and then throughly melted by the force of fire, which will yield a very fair Copper, no way coming ſhort of other Copper in goodneſs. Which Labour is very profitable, becauſe a great quantity of tartariz'd water proceeds from this Work; but that it may the more eaſily act upon the Copper, in extracting it from the ſtone or Marcaſite, a little ſalt is to be added in the boiling.

But if the Marcaſite or Copprious-ſtone abound with too much ſulphur, which yet ſeldom happens in the more ignoble Marcaſites, they muſt firſt be torrefied, that the ſulphur may be burnt, then to be ground, and boil'd with the tartaris'd water, and precipitated with Iron; which way more Copper is acquir'd than was in the Copprious-ſtone it ſelf, becauſe while it is precipitated, part of the Iron is exalted to Copper, part turns to Vitriol unlike to the natural in hardneſs; for a green ſolution remains, whereby Cloth and Yarn are made as black as with common Vitriol; alſo it affords the beſt Black for Shoemakers to colour their Leather, and is naturally adapted with Oak to conciliate a black colour to Wood.

If this vitriolated Water be boil'd in an Iron Pot till it be dry, and the reſidue melted in a ſtrong fire, you will obtain a moſt tenacious or tough Iron of wonderful virtue, if not to be preferr'd to good Copper, at leaſt to be compar'd with it. And ſo the common Copprice-ſtone of Iron is better than the filings or ſcales of Iron, if with the Lees of wine it be reduc'd by the ſpirit of the world into ſmall Balls, when you melt them, a very ductile and pure Iron will come out, fit for more uſes than common Iron; which labours if any will enter upon, they will reap fruits not to be deſpis'd.

It would not be beſide the matter to annex the manner how you might uſe both your Tartar and Aſhes at home, neither that you might be forc'd to ſell them abroad, but it would be too long, and rather hurtful than profitable to the preſent buſineſs. This I think to treat of farther another time, by the Grace of God.

THE

FIRST PART

OF THE

Prosperity of Germany:

Wherein is Treated of

The Concentration of Wine, Corn, and Wood, and the more profitable use of them, than hath hitherto been.

TO

All those Patrons that Love GOD, and favour their Country,

HEALTH.

Ye Pious, Prudent, and your Country-loving Patrons.

THE Most Excellent Glorious God, and our most Merciful and Bountiful Father, hath (out of his great Love unto, and Fatherly Care of us, from Eternity) set Nature before our Eyes, that he might signifie to us his Will; which said Nature, is no other thing but the proper, eternal, and only Will of God. To this Nature, God hath (as to his obedient and faithful Instrument) absolutely delivered, and committed his Will and Command to be by her faithfully and diligently performed; she accomplisheth the Task imposed on her, without intermission, nor resteth she one moment of time from doing the Divine Will with her utmost study and endeavour.

Therefore, deservedly ought we to learn to know, worship, and love the Creator above all things else whatsoever, seeing the Creator is known by the Creatures.

If his Creatures be great, and unperceivable to our sight, and so wonderful; certainly it of necessity follows, that the Creator is far greater, and far beyond all Human Understanding; and this, every one may easily understand: 'Tis therefore clearly and evidently manifest, that God Created all things for the service of man, that he might thereby acknowledge the Divine Bounty, and Honour, and fear the Creator, and bestower of all good things, and yield him due Thanks for his Gifts.

But seeing that it may so be, that the most just God will sometime or other, at last (being provoked by the perfidious malice of men, avenge himself on the most Impious living of this perverse World, by bringing scarcity of Food, (War, and the Plague); and seeing that it may so be, as that the small Company of the Pious, lying hid amongst the Impious Crew of the wicked, may partake of the same punishment: Therefore I thought it very expedient, with a cheerful mind to publish (to the Honour of God, and my Country, and for the comfort and solacing of its Pious Inhabitants) the Talent that God hath vouchsafed unto me, by the help of which, very many such Calamities as may come, *viz.* Famine, War, and the Plague, may be prevented.

But the way I have pitched on to serve my Country in, doth chiefly consist in the manifestation and Revelation of those most great Treasures that lie hidden in *Germany*, being such as by the regardlesness of Men have been hitherto unknown, unsought, and not gotten forth. I have therefore endeavoured, faithfully to manifest in this present Treatise, by what means those Treasures are to be sought for, and rightly ordered for the profit of my Country; and withal, to open the Treasures of the Noble State of *Germany*, wherewith it is most abundantly enriched, beyond all the other Countries of *Europe*, and hath hitherto enjoyed, and used (but not so well as it should have done) *viz.* Wine, Corn, Wood, Minerals, and Metals. For Ungrateful Men have extreamly wasted unprofitably, the most wealthy, and rich Benediction of God, who hath bestowed Wine and Corn on them, in abundance, and the Relicks (which they spent not) have they suffered to corrupt and perish with lying.

Nor

Nor is there any body that doth in the leaſt entertain any thoughts, by what means ſuch an abundance of ſo great Gifts, might be kept and preſerved for future years, which may be accompany'd with extream ſcarcity and Dearth. Every one ſhifts for himſelf and his, with that plenty of Goods he enjoys; and leaves another to take care for himſelf, and to ſee for time to come, that he provide himſelf for things neceſſary whereon to live. And it is come to ſuch a paſs, that the overplus which remains of the abundance of the Bleſſing of God, is meerly caſt away through a careleſs diſregard, and ſo nothing is preſerved for after times. And yet our Lord Jeſus Chriſt himſelf when he fed many thouſands of Men with Bread, commanded his Diſciples carefully to preſerve the remaining Crumbs, that nothing might be loſt; the which without all doubt he did for no other end, but that we might have the Gifts of God in high eſteem. But where ſhall we find ſuch as will imitate, and do the ſame; certainly no where, which is inexcuſable with God and good Men. Certainly ſuch a largeſs of Divine Gifts, is not beſtowed on us, that they ſhould miſerably periſh, or be caſt away; but we ſhould rather labour and take care of diligent laying up and preſerving (like ſo many Laborious Ants) all that overabundantneſs which we cannot make uſe of. Let it be but conſidered, I pray, in what great heaps Corn lies heaped hoarded up, and is ſpoiled. And is it not the ſame with Wine, which being gathered in ſuch over-great quantities, is become vile and abject, or caſt away?

What, cannot there be ſtore laid up out of this very plenty (which now is grutched at, as 'twere) as ſo many great Treaſures for future Calamitous Years?

Well however, though as yet this hath been left undone, yet I am confident, that ſome good Houſholders will be found, that will not deſpiſe this Inſtruction and Admonition of mine, but will condenſe the ſo much ſuperfluity of Wine, and Corn, and preſerve it againſt future Years ſcarcity. Nor do I at all doubt, but that others, after they have by this Book well learned the manner, will turn the ſuperfluous, and caſt away Wood (which lies and rots, and is reduced to nothing) into Salt-petre in great quantities; that by its help the Enemies may be reſiſted, and the Inhabitants defended. But in the three following Parts, which treat of the Concentration of Metals, and Minerals, wherein all kinds of Medicaments reſiſting natural Diſeaſes, ſhall be taught, I know that every one will find refreſhment, and help, againſt the future Plague, and Contagious Diſeaſes. So then, when we have Food and Drink neceſſary for a Livelyhood, and Salt-Nitre to defend us againſt our Enemies, and Medicines ſerving for the preſervation of us in Health, there remains nothing elſe we can deſire, ſave a little Gold and Silver, by which we may exerciſe Trade, or Merchandiſe, and furniſh our ſelves with Outlandiſh Wares. The which, that we alſo may get out of thoſe Mountains, we every where meet withal, and out of thoſe abject, and given-over Mine-pits, I queſtion not, but (God permitting) to effect it, and clearly to ſhew it in the three following Books of the Concentration of Minerals and Metals. Upon this account I would no longer keep by me this ſmall Book of the Concentration of things, but publiſh it to the Honour of God and my Country, (it being a Talent vouchſafed me by God.)

I do therefore Dedicate it to all Pious, Faithful, and Good Houſholders, hoping that my ſincere Admonition, and Inſtruction, will find ſome place, and not be rejected.

The three Parts I promiſed, ſhall ſhortly follow: Furthermore, I offer my moſt faithful help to every one in the opening and revealing the ſaid Concentration of Wine, Corn, Wood, Minerals, and Metals; for all things being in a readineſs, I can eaſily ſhew the manner of Concentration. And ſeeing I am ignorant, how long a time the moſt Merciful God will vouchſafe unto me, the uſe of life and light; I would not willingly bury with me a Science ſo eminent, ſo Noble, and ſo profitable to my Country. But if now it ſhould ſo fall out, that few or none ſhould at all mind it, yet have I done my part, and ſatisfied my Conſcience: Though indeed I do not in the leaſt doubt, but that there will be ſome good and faithful Houſholders, by whom theſe Profitable Inventions of mine, will be regarded, and be made uſe of for God's Honour, and for the Conſervation of the Country, and its Inhabitants.

This I certainly know, that if this Counſel, or Direction of mine, concerning the Concentration of Wine, Corn, Wood, and Minerals (which proceeds from the ſimplicity and ſincerity of my mind) ſhall find any place of entertainment, that our moſt praiſeworthy Country of *Germany*, will in a few Years ſpace become moſt exceeding happy, and be ſo enriched, that both high and low will be much joyed, and praiſe God, and give him thanks.

But I eaſily conjecture with what various and different Judgments this Off-ſpring of my Brain, will be expounded. One will haply give credit to the things I have ſaid; but another will condemn and diſdain them, as mere Impoſſibilities, and Dreams. But however, the truth will at length break forth, and the work it ſelf will purchaſe to its Maſter due Praiſe, and herein I content my ſelf. The moſt Bleſſed, moſt Merciful God, and our Father, that great Houſholder, beſtow on us his Divine Benediction, that ſo we may inſtitute in moſt places of this our moſt dear Country this Concentration of Wine, Corn, Wood, and Minerals; and may by the help thereof obtain ſuch Treaſures, as may ſerve for the ſuſtaining of our life, in time to come, atd for the reſiſting of our enemies, and for the Glory of God, and the help and ſuccour of very many needy ones in Diſtreſs.

THE

The PREFACE.

IF the *Proverbs of the Ancients are to be embraced as wholsom Doctrines, then certainly this (being none of the least) is not to be rejected; and is thus,* That he that will not hear, 'tis fit he should afterwards feel. *The meaning of it is this; If so be any one be regardless of a warning, and so come to damage, every one is wont thus to say of him, He is but justly rewarded, why did he not yield to a faithful warning? who will help him now?*

But however, I have endeavoured (for the Honour of God, of the Magistrate, and of my Country, and the benefit of my Neighbour) to shew, by good Admonition, and by a profitable Testimony, by what means, that great plenty we have in these as yet prosperous times, wherein we have abundance of Corn, Wine, and other things in great plenty throughout all Germany, *may not unprofitably be lost; but be preserved for support in those years of scarcity that are next to come, according as* Joseph *that most excellent Steward mentioned in Holy Writ is said to have done.*

And now that there may be as much prevention as is possible, that the Wine, and Corn perish not with lying, but be preserved against a future scarcity, I have published this little Book for every ones view, concerning the Concentration of Vegetables, Animals, Minerals, and Metals, in which, the prosperity and felicity of all Germany, *and indeed the Universal Treasure and Wealthiness of the whole World, is seated.*

And because such an abundant plenty of all these things begets a nauseating and loathing, as it were, of those Minerals, Metals, Wine, and Corn, wherewith Germany *exceeds all the other Countries of* Europe; *I judged it well worth while to constringe, or concentrate this plenty into a little room, and preserve it from the loss and destruction of the same, arising from Negligence and Contempt. For when such vile, or cheap things are driven into a small compass, the baser and unprofitable part goes off, and the nobler and better part is driven together, and preserved, and doth not so easily become corrupt as afore, when both good and bad are commixed together.*

And this is to be understood of the Minerals, and Metals, and of Wine, Corn, and Wood. For where the Water is separated from the Wine and Beer, and the more Noble Parts are concentred, as it were into a Centre, you may even preserve them as long as you list. And when you need either Wine, or Beer, the concentrated parts may be relaxed by the apposition of Water, and be enlarged, insomuch, that one Vessel will hold six Vessels of Wine; and this, taking up but one place, and yet contains six times the quantity, there will not need so much costs, nor will so much Wine be spoiled by vapouring away, as would be by six Wine Vessels, which must always be kept full. Besides, this farther benefit ariseth hencefrom, viz. *That out of such concentred Juices (if they be at hand) there may be made every* Autumn *new Wines sooner than ordinary, 4, 5, or 8 weeks time or more, and be sold at a bigger rate, than in the very* Autumn *Season, when the Grapes are ripe, and every Body furnished with Wine.*

NB. *For such a work there is requisite a certain peculiar Instrument, and artificial knack, by the help of which the Must may be holpen to a speedy fermentation; there are also other Conveniences which arise from these thus concentred Musts, which for Brevities sake we here omit. So likewise Beer being after the same manner concentred, doth bring a many more Utilities than ordinary Beer. For that Corn which eight Barrels were scarce sufficient to contain afore, need no more but one here, the which being put in the Beer Vessel, will not turn into Vermin; nor will it flie out of the Barn, but may be used after* 10 *or* 20 *years. Such Artificial Factitious Ales, seeing they are (in their condensation) boiled a longer while, are far better than the common sorts which are made of dried Corn, or Malt. Whosoever therefore shall in a great plenty of Grain, buy up Corn, and condense it by such Artificial Concentrations, and so lay it by, till a scarcity comes, will gain abundantly, and will not only get to himself an honest, and to others no ways injurious profit; but will withal (being thus studious of Charity and Mercy) deserve exceeding well of his Neighbour, if he helps him in his great necessity, and he will readily pay him for his Corn, whereby he may get Money to sustain his Family and be a profitable gainer.*

So then, no body is injured by this condensation, and concentration of Ale, or Wine, but both the Buyer and Seller are Gainers, and this should of right, be in every Man's heart, what condition soever he be of. It would be well done of Noble Men, Princes, Kings, Emperors, and other Magistrates and Common Wealths, if they would provide in their Store-houses for Warfare, such kind of condensed Liquors, and Juices, that so the poor may in a time of scarcity be made partakers of that plenty, and they will have no loss thereby, but rather benefit.

But the Condensation of Wood, and turning it into Salt-petre or Nitre, is far more profitable than that of Wine or Ale; for wood may be had even as it were gratis, *and be with a very small Cost transmuted into Nitre; the which may be kept without hurt in the Storehouses for a long time, seeing it is not wont to corrupt or perish, and be there conserved until it be made up into Gun-powder with Coals and Sulphur, both which are also not subject to corruption; so that it is not so very necessary (nay, rather it is hurtful) to have such vast quantities of Gun-powder in their Castles and fenced places. There are examples enough of Towers in which Gun-powder hath been stirred up, which either through negligence, or else by lightning, being fired, have in less than a moments time o'return'd whole Cities, and slain abundance of men. Now this mighty inconveniency may easily be prevented by this only Remedy,* viz. *If the Powder be not made up, but the matter thereof* (viz. *Nitre, Sulphur, and Coals*) *be only kept in readiness, wherewith the said Powder may be made, as necessity requires: Besides, herein also doth the concentration of Wood exceed (as to profit) the condensation of Wine and Ale, not only because there lie vast heaps of Minerals in* Germany, *(which not containing a fixt and corporeal Gold, are therefore disesteemed) that admit of a separation of their better part, and fixation of it by Nitre; but withal, the meaner Metals (their superfluous Sulphur being burnt up) may be transmuted into better; and the perfect Metals,* viz. *Gold and Silver, may (by the help thereof) be destroyed, and be enforced or concentred into a better part; the which thing the following* Second, Third, *and* Fourth Parts *treat of.*

So then, this Transmutation of Wood into Salt-petre or Tartar, of both which not only great quantities may be sold, but

but may be also applied to sundry uses, will bring to our noble Country of Germany (*in which there is an incredible quantity of Wood to be had almost every where* gratis) *a most notable encrease of Power and Strength, not only against its future, but its present Enemies.*

Whosoever therefore shall have abundance of Wood, shall likewise be enriched with store of Wealth, provided he will but set his hand to the work, and not fear that ever Salt-petre *will be such a Drug, as to be of no value, and not vendible: And yet if it should so be, yet in the Explication of my* Miraculum Mundi, *already published, I have manifested so much, and will, in the three following parts of this Book, manifest such things as concern the use of this* Salt, *that there will never want such, as penetrating into the knowledge of these Secrets, will not full well know its Use.*

He that hath Eyes, let him look about, and use them, for the time comes, yea, and by little and little approacheth, in which Knowledge will be a profitable thing; and it will be well for those who are seasoned with the knowledge of things profitable. Verily, Knowledge is better than store of Goods, for no body can carry them with him, nor (in some cases) help either himself or his Friends with them. Happy is he that can say with the Philosopher, All that is mine do I carry with me: *How injuriously do they speak of the most bountiful Lord God, who accuse Him for that He hath forborn the bestowing of Wine, plenty of Corn, Pome-Citrons, and Gold on some Countries, and yet fully as great Treasures are to be found there, if the Eyes of the Inhabitants were not darkened? If there were nothing else, yet certainly there is Wood to be found, which without any labour, costs, or trouble of Rich or Poor, doth grow night and day, and offers it self unto us, and as it were, saith unto us in these words;* What! am I of no use? Do not I come forth to thy view, that thou maist by contemplating on me acknowledg the Divine Bounty, and make use of me with thankfulness? *There is not therefore any reason why one Country should exalt it self before another, because it is better; or contrarily complain, that the Divine Benediction less regarded it than other Countries; no, each Country hath enough, if it would but be content with what it possesseth. As for those Countries which are even destitute of Wood, they do nevertheless abundantly enjoy the Divine Benediction; witness* Island, *and other cold Northern Countries, which have their Corn, and other Necessaries for Life, brought them out of other Countries. But now on the other hand, these Countries afford Cod or Stock-fish dried; and so, though they want Trees, Fruit, Corn, and Wine, yet they do not want, and are equally as well nourished by the Divine Bounty as the rest be. Though they want Wood, yet have they Pit-Coals; for the Earth there is very sulphurous, and at the Mountain* Hekla *it burns perpetually, and casts out fire, smoak, and ashes, and yields to the Inhabitants a great quantity of Brimstone, which they dig out and sell to our Country Mariners and Traffiquers, thereby sustaining themselves.*

Some one or other may object to me and say, Seeing that Salt-petre *is to be accompted of as an* Universal Subject, *and to be found in all things, it must necessarily be, that seeing* Island *has no Wood at all, the* Salt-petre *is to be found in the dry Stock-fish, for otherwise this Salt can't be said to be* Universal, *as being not to be found in such or such a Country.*

Well then, to clear this doubt, I do affirm; (as I said before) that Nitre is in Fishes also, though not in such plenty as in other subjects, viz. *in Wine, Wood, and Corn: But it is found far more plentifully and potently in Stones, with which those Countries are well stored; and any one may easily guess what Riches they would produce, were they but versed in the knowledge how to extract it; for in Stones which by burning are turned into Lime, (the which may be done without Wood, even by dried Turf or Pit-coal, and that easily) Nitre is as abundantly hidden, as in Wood, and in other Vegetables: Nor is there ought else requisite, save the knowledge of the way of its extraction.*

If therefore that harsh and wild kind of Country, wherein nothing grows, be put in the Philosophical balance, with the most rich Country, it would (seeing it contains hidden in its Earth and Stones such great Treasures) easily exceed it, and obtain the chiefest place. There is therefore no reason why any one should complain before God: A small man doth usually exceed, as to swiftness and agility, one that is big and tall: A weak man may oppose the acuteness of his wit against the strength of the lusty: A poor man enjoys Quietude, and patiently undergoes his more hard fortunes; but contrariwise, the rich is invironed with cares. And this may be also understood of other living Creatures. These things being well considered, every one may understand and perceive, that God hath satisfied every one, and that there is no Creature that can justly complain.

It is reported of the Peruvian *part of* America, *That it is enriched with the most abounding Silvery Mountain* Potosi, *seated in a part of that Region, and is about some* 50 German *miles in compass, and that it doth by its exceeding cold Air hinder the growing of any Vegetables, and yet notwithstanding, there is such a notable power and excellency obtained by the Riches of that place, that the City there founded doth abound with the best Wine, Corn, Sugar, and other such-like necessary things, and is scarce inferiour in bigness and fair Buildings to any City of* Germany, *and from this very Mountain only receiveth it this felicity. It is hence evident, that all such things are not unprofitable, which (by reason of the meanness of the outward shape) are not so well known to every body; for sometimes a Countryman throws a Stone at a Cow, which is far more worth than the price of the Cow is, and yet it is contemned, because unknown.*

The external and superficial Figure therefore of a thing is not alwaies to be regarded, but its inward parts are to be search'd into and viewed; and that we may attain hereunto, Alchymy *points out to us the way, (She being the Instrument of the true praise-worthy Philosophy) and opens the Gate, whereby we may search into the inmost bowels of every thing.*

He who well knows the fire, and the use thereof, will not be distressed with want. And he that has no knowledge of the same, neither will he throughly search into Natures Treasures: From these things it is evident what Treasures we Germans *do unknowingly possess, and yet convert them not to our use; And were not foreign parts as ignorant too of these things as we our selves are, they would readily have upbraided us* Germans, *that we spend more time in eating and drinking, than on good* Arts *and* Sciences.

Now as concerning my writings about the concentration of Wine, Corn, *and* Wood, *and the condensation of 'em, I shall never be better able to prove and confirm the Truth of the same, than by producing it to manifest light, that so the Eyes seeing it, all admiration may cease, and all incredulity vanish. There is credit therefore to be given to all the things mentioned in this Book, as to an experienced Truth, and which are not made publick for any other ends, save only that those natural Sciences may tend to the utility and benefit of my Neighbour. Whoever therefore shall believe them, will purchase Honour and Profit; and contrariwise, he that will not believe, will get only disgrace and detriment.*

I will therefore predict or foretell, that this one only Artifice of making Salt petre *in such great plenty, and the way of using it to metalline works, will bring incredible Trea-*

ſures to our Country of Germany, *if we be not too negligent, or let it ſlip by a ſluggiſh ſlothful drowſineſs. I do verily believe, that if God doth yet vouchſafe me one years life, that this ſaid Artifice of* Salt-petre *will be profitable to very many; but if ſo be that it ſhall not pleaſe the Divine Majeſty to prolong my life ſo ſhort a time, it may however be accounted of, that God hath indeed ſhewed us* Germans, *as heretofore he did to* Moſes, *the* Land of Promiſe, *but hath, by reaſon of our ſins and incredulity, ſhut up the paſſage againſt us.*

But that I may abſolutely ſerve my Neighbour, and that he may have no cauſe to complain, as if I had ſerved him but by halves, in that I have not deſcribed the Preſs for Wood, together with the appertaining Inſtruments, I do now therefore certifie every one, that all the things neceſſary and requiſite for the concentrating of Wine, Corn, and Wood, are to be ſeen in my cuſtody in perfection.

If now any one be deſirous of receiving benefit from his Wine, Corn, or Wood, and that he find it highly to concern him to get this knowledge he will well know, by the inſpection of the Work preſented afore him, wherein lay the defect as to the getting this thing, and what means the ſaid defect is to be holpen by; but the Inſtruments that I have mentioned, ſhall be no longer to be ſeen, than from the Calends of March *to the Calends of* September, *this preſent year* 1656. viz. *ſix months time; for I have purpoſed to my ſelf, not to render my life burdenſome alwaies unto my ſelf, by carrying ſuch troubleſome burthens about to and fro, but at laſt to get a quiet ſeat and abode. So then it will, by this here ſpoken, be evidently manifeſt to every one, what he is to do as touching this matter.*

The three other Parts concerning the concentration of Minerals and Metals, ſhall (if God permit) ſhortly alſo follow.

But becauſe Nitre is the alone Inſtrument of that work, and that no body can get any eminent profit, unleſs he can have Nitre at a very cheap rate, it is wholly neceſſary that ſome labour be beſtowed about the procuring it, which if you can get good ſtore of cheap, then will the hoped-for profit be perceived, both out of Minerals and Metals: If not, vain will it be for you to make your ſearch into that Mineral kingdom.

Well, I do affirm, That by the benefit of Nitre, things wonderful may be effected in Metallick Labours; yea, ten times more than what I have deſcribed in my ſmall Treatiſe, called Miraculum Mundi, *or dare to deſcribe for the future; for all things requiſite to true* Alchymy, *may be perfectly accompliſhed in it, by it, and with it.*

Herewith I conclude this Preface. Whatſoever is here wanting in this Treatiſe, for brevities ſake, the demonſtration viſibly expoſed to view, will afterwards compleatly recompence, inſomuch that any one will eaſily wind himſelf out of all doubts. And here we reſt for this time.

THE FIRST PART
OF
The Proſperity of Germany, &c.

IN the Name of the moſt Holy Trinity do I begin to deſcribe the moſt great Wonders of God, that I may manifeſt to every one (without concealing ought) His Grace and Mercy, which He embraceth Mankind withal; and I pray God, the Father of us all, the merciful Creator of Heaven and Earth, to guide and direct this Work, that it may ſerve to His Divine Honour, and tend to all our welfares. *Amen.*

We will enter into *Franconia*, and ſee what a wealthy and large Benediction of God is to be found therein: And I will firſt begin with Wine, none of the leaſt of the moſt noble Creatures of God, and will demonſtrate how ungrateful we ſhew our ſelves to the beſtower of all good things, and how baſely we abuſe His Goodneſs.

Every one knows what a noble Creature wine is, how ſtrained from the Grape and made, and therefore this thing needs no further deſcription, foraſmuch as others have hertofore ſufficiently enough done this task and daily Experience is an abundant teſtifier of the uſe of the ſame. It is behoveful here, that we only ſignifie how it ought to be handled better than it has hitherto been, and may ſo likewiſe bring a greater profit and utility to the tillers thereof than hitherto. Every one knows, that wine is the nobleſt amongſt all drinks, and moſt conducive to health, and may and ought to be called the Pureſt drink: It cheriſheth old men, and heats the cold, but ſuch as are of a tender age, ſhould deſervedly ſhun wine, becauſe being drunk too ſoon, it eaſily inflames the Liver, and dries it up, and ſtirs up various Diſeaſes, and at laſt cauſeth Death it ſelf. So then, there is nothing ſo good, but may alſo do hurt, nor is any thing ſo evil, but doth ſometimes bring ſome benefit, according as the difference of the uſe is which it is applied unto; as is here evident in Wine; the which being drunk moderately, and at due ſeaſons, doth not only excellently well digeſt and concoct the Meat in the Stomach, but likewiſe evidently ſtrengthens the Heart, Brain, and Vital Spirits, and generates pure and ſound Blood and Fleſh. Contrariwiſe, being immoderately taken, it overflows as 'twere the Stomach, Lungs, and Liver, fills thoſe Veſſels with many evil humours, and obſtructs them, ſo that they cannot well perform that office whereto they are deſtinated by *GOD* and *Nature*, but are overwhelmed with whole Troops of Diſeaſes; for the Heart and Brain is ſet upon by their ſpiritual efficacy and hot nature and property, and is weakened, and the vital ſpirit is overcome and ſuffocated, as we ſee in the fire, the which when greater doth alwaies ſuppreſs and overcome the leſſer.

Hence it comes to paſs, that men that load themſelves with daily drinkings, do little differ from new-born Calves and Geeſe, and are wont to be neither profitable to God, nor to Men, nor to themſelves.

In

In the Name of God, therefore we will proceed on in the matter we have proposed, and see by what means more profit may be reaped from Wine than hath hitherto been.

In the first place, he that aims at the bettering of any thing, must know what the thing is which he studies the amending of, and of what parts it consisteth.

Therefore, as concerning Wine, it consisteth as well as the other Vegetables of three principles, *viz.* of *Salt*, *Sulphur*, and *Mercury* (that I may use the Philosophers terms). The *Mercury* is its insipid moisture, and the *Sulphur* is that burning Spirit which is extracted or drawn out thereof. You shall thus know the thing, by this following Experiment. Put a Cucurbit full of Wine in a B. and with a gentle heat draw off what will come, but yet so, that the parts which in the destillation alter or change themselves, be each of them received apart in its peculiar Receiver. For example; If there were 12 parts of wine, or 12 measures, there ascends first only one part of spirit, which is the soul and life of the wine; after it, come ten parts or measures of insipid water; the remainder in the bottom of the Glass is a thick and austere or harsh matter, which being the Tartar or Salt of the wine, is also almost one part or measure of the wine. Of these three parts all wine is compounded, but yet partakes of one or the other of the Principles, more or less, according to its being more or less mature, or its growing in such or such a place. As for example;

The Austere Wine hath alwaies more Tartar and less Spirit than the Ripe Wines; and contrarily, the ripe wine doth abound with more Spirit than Tartar, as the *Spanish* and other extraneous wines witness, which do alwaies abide sweet, and plainly have no Tartar in them; the reason is this, Because in those warm Countries they are brought by the Sun to meer sweetness, and so are ripe; so that the austere Tartar or Salt is throughly changed, and concocted into a sweet Sugar. Hence it comes, that the said wines do not in the afore-proposed Examen leave any austereness, as our wines in *Germany* do, but rather yield twice as much spirit, and scarce the half part of insipid water: Whenas austere Wine yields about a twentieth part of spirit, the ripe *German* wine yields almost a twelfth part, and the *Spanish* a sixth part of spirit, four parts of water, and one part of fæces without Tartar. So that from good *German* wine there comes (as I said afore) one part of spirit, ten of water, and one part of austere or sowrish matter.

He that knows these things, will easily contrive and prepare for himself by the help thereof, at all times, be it hot or cold, good and constant, or durable wine. Neither is there any room left a man here of complaining, as if God shewed greater bounty to men one year than another. The fault of this defect is not to be imputed to God, but to our own selves, who know nothing, nor are willing to know, nor study how to help Nature; for Art can bring an assistance and help to Nature when she is impeded in her work, and is unable to bring her Fruits unto a maturity, provided the Artist removes away that which the wine naturally abounds withal, and addeth thereunto what it is destitute of.

For example, Let us examin a thin wine, which being not sufficiently concocted and ripened by the Sun, is endowed with too much sharpishness and water, and contrarily has but little of spirit; if now to such a wine, when it begins to boil or ferment, some spirit shall be added, so that it may work together with it, it will be even as well ripened in the wine-vessel, by the benefit of this fiery spirit, as if it had been ripened by the Sun, as it hung upon the Vine; insomuch, that by this means there mought be made excellent wines every year, if any had but the knowledge of thus helping them.

NB. But now such a spirit must not be such an one as that common Adust or Brandy-wine is, but a grateful and pure Essence of wine; the manner of making it I have described in my *Vegetable Work*. Now by how much the more this Spirit shall ferment or work with such a wine, so much the stronger and more efficacious doth the wine become: Forasmuch as all the Virtues of all the whole wine consist in the Spirit only, and the Tartar or Salt doth by its muchness make it austere and sharp. But *Musts* being by such an Artifice made stronger and more efficacious, do keep a longer time afterwards without corrupting, and may be carried or transported whithersoever one please; whence it comes to pass, that they are never spoiled, as they are otherwise usually wont to be, when 'tis not of ripe growth.

From these things 'tis evident, that out of one Must, grown in one and the same *Autumn*, there may with ease be made wines of 3, 4, or more kinds, according as there is more or less of this spirit added to the *Must* and fermented with it.

There is also another way, by the help whereof every austere wine is easily corrected and amended, thus: In the Vintage time, let the liquor of the *Must*, or of the expressed juice of the Grapes, be so boiled in peculiar Vessels, that the unprofitable moisture or tasteless water do exhale by little and little, until thou hast as much as thou wouldst, or as the efficacy of the wine, or the degree thou wouldst by correcting reduce it to, shall require: For, in the exhalation of the superfluous moisture nothing goes away, save that insipid water; but the sweetness and the austereness remains in that thick and condensate juice, like to Honey; so that that boiled mash comprehends all the strength and virtues of the wine, concentrated as it were, and condensate, and will again disclose them, if it doth again work, with water thereto added in a due proportion; but the use of this condensate *Must*, which as yet hath not wrought or fermented, is this, That it can be at all times carried, and most profitably sold in far remote Countries, which thing could not afore be done.

For every one knows, that when there is a cold Summer, Wines become immature and acid, and are not wont to keep; for as soon as they come to be a year old, they are covered over with a filmy skin, and being mouldy, corrupt, because they have not in them spirit enough. From whence it comes to pass, that many times Vintners, or Vineyard-keepers, suffer great loss, after that they have diligently betook themselves to dress the Vineyards for an whole year, and have lived sparingly and hardly, and working hard, have sustained their lives with Bread and Water, hoping that upon selling their wine they should scrape together a little Money, to buy them some Clothes and other Necessaries for their Family's supportation; for the expected plenty of the wine hoped for, and of the profit accruing by the store of Money for it, when sold, hath prop'd them up with this hope; but now the wine fading and deluding their hopes, and turning into an acid and austere taste, they cannot sell it, seeing 'tis scarce worth the carriage; or if it be sold, 'tis at such a mean rate, as scarcely sufficeth to discharge the Cost of dressing it; and what shall now be done for Food, Drink, Raiment, and other Necessaries to sustain the Family?

And

And yet the Vines must be dressed for the next year too, and more Monies laid out upon them; but from whence shall Monies come for Food and Raiment, in the mean time? Alas, what course will they take if some such-like years should follow one another together? Either the poor miserable men must, together with their Wives and Children, famish, or else turn Souldiers, and be kill'd, or be made so desperate, as to betake themselves to thieving and robbing, and so finish their daies by an Halter: For the present world is so much estrangd from Mercy, that one will not use so *much* Christian Charity, as to help another in his necessity.

And besides, the ingratitude it self of men doth sometimes make others slow and fearful of administring and affording a mutual help; forasmuch as very many, when they are rid out of their incumbrances, do refuse to restore those things, or by labour to requite or make amends for the things by which they were delivered out of their Straits.

Hence it comes to pass, that he who does a friendly good turn, for such an ingrateful man, loseth his Money, and by reason of that so ill placed formerly, abhors the lending his helping hand again.

Now, that such great inconveniences may be removed, and the Vine-dressers somewhat holpen, so as that they might every year sell their wines at a beneficial price, and may never be oppressed with that foresaid detriment; it may very conveniently be done by the help of this concentration or condensation, by evaporating the *Must* to the consistence of Honey, the which may profitably be carried into far distant places, in which no wine is accustomed to grow, and be there sold. Such now as buy up such Must thus condensated by boiling, do now know how by dilating it with Water, to reduce it again into good wines. This Artifice therefore being so laudable, will be helpful to both, to the Vine-dresser, in yielding him presently ready Money for his Must, and to the Merchant, in easilier furnishing him with Wine, and quitting him of so much Charges in the Carriage.

But that the business may be yet the better and more clearly understood, let us see by making computation, what the benefit and profit of this condensation is.

Let us suppose then, that a Wine not ripe remains acid and weak, and that a *Franconian* Urn, or half an Hogshead of *Frankfort* measure, yields scarce a Florin, or a Doller at the utmost. Such a Wine as this will not quit the Costs of the Carriage, though but for 12 miles; [*a* German *mile is three of ours.*] for it degenerates by the carrying it, and becomes mouldyish, as 'twere, and turns sowre, so that the Huckster can't sell the same, and he'l have a care how he buys such wines another time; and the Vineyard-keeper is even enforced to keep them to his great loss, forasmuch as all his safety or dependance is built thereupon.

As for the Rich men, tho' they have some acid wine, they are not undone by the loss, for they have still by them other better wines, which they mix those worser and more acid wines withal, and so sell them off; or else they keep such thin wines till the Autumn comes, with more plentiful and riper Grapes, and to the Must proceeding from them, do they pour this thin Wine, and let it work therewith anew, and by this means it becomes vendible. But yet the Gain arising hencefrom, is sufficiently poor and mean: For by how much the thinner the acid wine is than it ought to have been, tho' it be mixt with good Wine, yet doth this become so much the worser; nay, it sometimes happens, that both are corrupted and lost; for as much of help as the acid Wine gets from the good wine, so much of goodness doth depart even from the good wine. So that such a kind of bettering after whatmanner soever it be instituted, cannot be very profitable or advantageous.

For example, that I may be the better understood, let us instance in two pieces of Gold, each of which should be the value of 25 Imperials: Let them be put in the Balance and examined, and being examined, let one of them be the due weight, and let the other be less in weight or price the value of four Imperials. If now you are minded to take so much away from that piece which is of current weight, as to make them both of alike weight, you may indeed so do, but yet you are no waies benefited thereby, but rather suffer loss: Forasmuch as you took away from that piece that was of due weight, and added unto the other piece that wanted of weight, so much of its value is departed, and both pieces will be unfit to go in payment, as wanting their due value and weight. What profit therefore can hence redound unto any man? Even so is the case with the Wine, for if one should get some two load of wine, and could sell one of them for 20, and the other but for 10 Imperials, and yet should not be accounted of as vendible Wine, and now the Merchant should mix that thin wine with the better, that they may both be equal, would not that better wine become worse, and that thin wine be rendered not much the better? For my part therefore, I cannot see that such a kind of meliorating can bring much profit.

But as for my bettering and correction, it is always profitable, whereby the acid wines are not corrupted by the acid, but the good and superfluous humidity only is separated by the benefit of Art, and the good part being condensate in it self, and by it self is reduced into a narrower compass.

NB. He that is so minded, may separate from the sweet Must, a fourth part only, or a fifth or sixth part, by evaporation, and presently bring it to such a pass, as to work or ferment; for they become so much the better, by how much the more water hath been consumed by evaporation: If the Quintessence of wine be added to that working Must, the wines become the better, and the more generous. This kind of way may be made use of in those places in which the wine doth for the most part remain acid; for there needs not this Art to those Vines that Nature hath ripened.

Besides, the wines may be condensated to the thickness of Honey, that they may be thereby rendered the fitter for Transportation. Six Hogsheads, or *Omæ*, of Must, may be so condensated, that one Hogshead will hold them; the which (if need be) may again by the apposition of 5 Hogsheads of water, which quantity it lost in the condensation, make 6 Hogsheads of wine of the very same goodness and efficacy as it would have been of before the condensation, if it never had been condensated, but been presently put out of the Press into the Barrels, to have fermented and work'd into wine after the usual manner.

NB. But now if any be desirous of making his wine better and more noble than it would have been afore the Concentration, then he must not put five, but only 4 parts of water; for should he add but three Hogsheads or parts, it would be yet better and nobler by one degree than the others. Hence is it manifest, That it is in the hands of the Artist to make and alter these wines at his pleasure, and to render them strong, stronger, and middling, and by the addition of water to give them even what efficacy and what virtues you list. But now, to all the mixtures he may add the soul of wine, if he has it, that the wines may thereby be the sooner clear and pure. For the Quintessence of any wine being conjoined with new Musts, and working with them, brings them in a short space of time to clarity

clarity and purity, so that they become transparent, but principally when they are tartarized, or full of Tartar, for the Spirit of Wine brooks not any Tartar, but precipitates it in the fermentation to the bottom, or drives it away from it self, and so by consequence makes the Wine clear and transparent. But as concerning, what means the Tartarized (Spirit or) Essence of Wine is to be artificially prepared by, 'tis needless to repeat here, forasmuch as it is already described in divers of my Writings hitherto published, but especially in the Vegetable Work.

Besides, it is not so convenient, that every one should know, by what means the concentrated Musts may be prepared with water, and the Tartarized Quintessence. It is sufficient in this place, to know how the Musts are to be concentrated, or brought into a narrow compass, that so they may be transported and sold. Let this be the care of the Merchants to know how to use them when they have bought them. For the Brains of the Vineyard keepers are incapable of these things. Yet nevertheless, there will be some Men who will know how to make a due use of such boiled and condensed Musts, if they can but get them, and every one may be Master of this Affair, if he has but Coppers and Kettles, necessary for such an Operation; whereby he may make store enough of Juice. But yet every Countryman can't get such Kettles, neither will it be worth while, forasmuch as a small Portion of Wine, will not be able to quit the Costs. But whosoever bestows his Study and Moneys in exercising this Artifice, will reap thence from a great deal of Utility and Advantage. But whether he does these things, or does them not, he neither benefits, nor injures me. 'Tis sufficient, that I have evidently demonstrated to the Vineyard Masters, by what means they may always sell their Wines, whether they be ripe, or have come short of their Maturity.

But for the better instruction of the Courteous Reader, I will compute the Charges of this Operation, and show, what gain is to be expected from the Condensation of these Musts.

In the first place therefore, let us buy some Musts in those places, in which they are thin, and are sold for a mean price, *viz.* twelve Urnes, or six Hogsheads, or Oma's, for *xij.* Imperials; [an Imperial is about 4 *s.* 6 *d.*] this Must we will condense to the Consistency of Honey, so that there may be but one Hogshead, or Oma remaining. Let the Costs requisite to this Concentration (always provided you are furnished with the Copper Vessel) be valued at half a Dollar, or thereabouts; and the charge of the Wood we'll count an Imperial for. The Wine Cask which is to be filled with this condensate Juice, we will value at half an Imperial, its carriage forty Miles, we'll reckon six Imperials for. All which Charges being summed up, make nineteen Imperials and an half. And so much will be the Charges of one Hogshead, or one Oma of this Condensate Must, and its Carriage forty Miles. This Must now being brought into such a place where Wines are dear, you may at any time of the year, by the addition of Water, and by Fermentation, transmute into good Wine. And that one only Hogshead being the condensate Juice of six Hogsheads of Must, will yield thee so many Hogsheads of such Wine as the Must would have been afore its Concentration. And if thou desirest to have thy Wine stronger and nobler, than as it comes out of the Press, and than it could be afore this Condensation, you may omit the putting thereunto so much water as it lost in the Condensation, and lessen it proportionably, that so those six may make no more than four Hogsheads, and they will be the more generous; the which thou shalt far better have by this means, if *viz.* You know how thereunto to adjoin a Quintessence.

If now, that one Hogshead of juice, which afore its Condensation was six Hogsheads, doth again yield four [and no more] it must of necessity be much better, and more noble than otherwise it would have been, had it been made after a Natural manner, (*viz.* just as it came from the Press.) And by this means too, it will last the better, and may be the easilier transported and sold.

So then, if in such a place as is 40 Miles distant from Wine-making Countrys, an Hogshead, or Oma, is sold but for twelve Imperials, and you have of six Hogsheads of thin Wine, made four of better, and each of these you sell for but 12 Imperials, yet you shall have 48 Imperials, out of which substract your 19 and ½ Charges, you shall have clear Gains 28 Imperials, and ½. But I have set a most low price on this Wine, for in such places which are about some 40 Miles from those Countries, in which abundance of Wines grow, an Hogshead, or an Oma, is not usually sold at the Rate of 12, but of 24 Imperials. The gain therefore of about a Wayn-load of such a thin Wine, which haply would have corrupted with lying, and never yielded any profit, doth at the least yield above fifty Imperials.

Every one now may easily see how much Gains this Artifice of the Concentration of Musts doth bring. For besides this Commodity arising from this Labour, *viz.* That the Musts being presently sold, yield ready Money; there is this also, that the Money being again presently disburst, opens the way for the next years profit. The Merchant also has this benefit by this Labour, that he is not enforced to pay so much Water's carriage so long a Journey; and that he may even at his pleasure make his Wine more or less strong and efficacious; for what a deal of profit is this, for to have all the Wine of six Hogsheads, carried in one Hogshead.

Besides, the Merchant doth not only gain the price of the carriage of those five Hogsheads, but also is quitted of the fear of the Carter's corrupting, or spoiling that Juice by the way, as is usual with them to do with Wine, drawing it out, and filling up the Vessels again with Water. This danger these Juices are not subject unto; and may be kept in great plenty in fruitful years of Wine, until you need them. For they are not wont to be corrupted, if they are but kept in pure, and well shut Vessels. By this means every Vintner may in such exceeding plentiful years, furnish himself with a great Treasure, and store of Wines, and so afterwards, when a dear year comes, reduce his Juices into Wine, and enjoy a great deal of profit.

I have to this end described this so famous an Art, that the common Vine-Masters, may have present sale for their Musts, and not be enforced so long to keep them, till some Carrier comes and enquires after Wine, but may presently get their Moneys, and may profit themselves by bestowing them to the use of their Family. So then, it fares not only well, which the Vine-Masters, and the Merchants, but also with all such as dwell in those places which yield no Wine, because by the benefit of this Medium (or Artifice) they may also drink Wine at a cheaper rate. For if any Honest Citizen provides himself with an whole

Hogshead, or half an Hogshead of this Juice, he may turn it into stronger, and weaker Wines, and all times of the Year make new, and as yet fermenting sweet Musts, whensoever he pleaseth, and as oft as his need requires; and may by the apposition of Spices, or Herbs, make Aromatical, or Physical Wines; which thing cannot be effected without these Condensate Juices; forasmuch as Sweet *Musts*, cannot be carried by Land to any other place, for that they presently ferment, and boil up, and will either break out of the Vessels, or rend the Cask, and be lost, which (by having these Juices) is not at all to be feared. I do therefore think that I deserve exceedingly well of very many, by the faithful manifestation of this Artifice; which deed of mine, whether it be praised, or dispraised, yet will it not be despised by such men as shall apprehend, and perceive the benefit and Commodity of so great an Artifice.

It remains now, that we also describe, and set afore your Eyes the Instruments and Vessels serving to this Condensation, (without which, this Concentration cannot be effected) and withal shew the manner of proceeding, which is to be thus ordered.

In the First place, provide a Copper of such a bigness as you shall judge needful for the great, or less quantity of Juice you have; let it have a plain and even bottom, and let it have the sides about a Span high, and get it well Tinned over in the inside, and not Leaded, the which Vessel you must put in a Furnace of a sizeable bigness, and so order it, that being set in the Furnace, the Flame may come but only to the bottom, and not be able to touch the sides. The Walls of the Furnace are to be some two foot high, and must have an Iron front, or Stone Door, serving for the putting in the Wood, and registring the Fire, by opening and shutting it. At the backside is to be an hole of such a bigness, as may suffice for making the Fire burn by the access of the Air, and for carrying away the Smoke and Flame. But it must be so ordered, as to be covered with a broad stone, if need be, that so the fire may on such wise be regist red, that the Juices may not boil over by the overmuch fire, or taste of burning. These Juices are to be so long boiled with the wood, until they begin to wax thick, and then more new Must is to be thereunto added, this addition is to be so long made, and so often repeated, until the Copper be almost filled with those thick Juices. Then the holes of the Furnace that serve for giving air, are to be shut both above and below, that there may be no flame under the Copper, but the bare *heat* of the fire, and a sweet and gentle warmth, which will bring the Juices by a sweet decoction to the consistence of Honey, and will condense them without any adustion, insomuch that they will become as sweet as Sugar.

These Juices, you may let out by a Pipe, or Cock placed near the bottom of the Vessel, and shutting it again, pour in more to be condensed after the same manner, until all the Musts are condensed; but you must not presently put the Condensate Juices, assoon as ever they come hot out of your Copper, into your Barrels, but let them run first into some wooden Vessel, and be there left so long till they are cool, then put them up in your Barrels, and shut them up tight, and so may you keep them whole and sound, and free from Corruption, even as long as you list: For if you should put them hot into your Barrels, and so shut them up, the Barrels would burst, or else when you open them, would (by reason of the pent-up Vapours, which can have no exhalation) break or run out.

NB. And here comes a notable Secret, which I think good to add. When the Juices have rested some two or three weeks, and be afterwards dissolved with warm water, the residue of the Tartar which would have made the wines acid, will fall down undissolved to the bottom, in the form of small and big Crystals, and being washed with common water, may be used instead of Tartar forasmuch as it is nothing else than a meer absolute Tartar. Now this separation of the Tartar, is of great concernment as to the Wine, for it thereby becomes much better than if those Crystals had remained dissolved with it. Nor is any thing lost by this means, for that the Tartar is of as much value as the Juices: And besides, the Wines will be by this means freed from their acidity, and rendred better and sweeter; which thing verily deserves to be esteemed of as a great and profitable Artifice; and which, many there are that will know to use it to their great profit.

Verily, he that is of so dull an Apprehension, as not to be capable of understanding these things, that are so clearly, and evidently manifested, will not be any whit the better by larger Discourses. But he that has a desire of setting about this work, will insinuate, or work himself by a farther Meditation into the inmost centrality as 'twere of this so great an Artifice, and will with a far juster mind bear with me, in that I have not so much time at present, as to use a more prolix, or larger Stile.

But if so be, any do desire to have this Artifice declared unto him, by a more clear delivery, let him read my Explication of the Appendix adjoined to my Fifth part of the Philosophical Furnaces; as also the Vegetable work, and there he shall find more such Artifices. Or if haply it concerns him, he may see in my Laboratory, the Furnaces and Coppers requisite to such a work, together with the Manual Operations.

I am even constrained briefly, and as it were by the bye, to insert thus much, that if some more than usually unskilful Men cannot understand those things which I have declared concerning the three Principles, *viz.* That all Wine must needs consist of the same, to wit, Salt, Water, and Spirit; I dare boldly and confidently averr, that he who knows how to conjoin (according to art) these three Principles, may every where make good Wine.

NB. But yet I would not have such an one perswade himself that he can do any good, if he mixeth Tartar, Water, and Spirit of Wine together, no, no, that is not the way for him to be Master of his desire. There are far other-guise Manual Operations, requisite to this Artifice, and such as I think it inexpedient to manifest in this place. Let every one be content with the things at present shown him, haply God will sometime or other bestow (on him) better.

CHAP. II.

Treateth of Corn: Shewing what means it is to be Concentred, and Condensated by, so as to be Exported in great Quantities into other Countries, whereby both Gain and Moneys may be thereof made.

I Have instructed you in the foregoing Chapter, after what manner such VVines as are of a mean price,

price, may by the help of Concentration be conveniently transported out of one Country into others more remote, where no Wines grow, and produce good profit. The which Artifice may be of most great benefit to the Inhabitants of such Countries as abound in Wine, and want sometimes Chapmen or Merchants for the same.

'Tis very well known to every one, that in most places of *Germany* (but especially in *Franconia*, and in the other Countries adjoining) Corn is so exceedingly plenty, and of so vile a price, that the Inhabitants know not what to do therewith; and for that reason it lies and rots in their Barns and Granaries, the exceeding abundance thereof either hindring the sale of the same, or the great costs and charges of Carriage hinder the Transportation of it into the lower Countries of *Germany*, where 'tis dear enough.

Hence comes it to pass, that the miserable Inhabitants have indeed Wine and Corn enough, but want Moneys to pay the Tributes due to the Magistrate; so that tho' they have such plenty of the Divine Gifts, and so much Riches, yet for all that they are in great penury and want, in that they cannot sell off so much as to pay their Family's expence, *viz.* Men-servants and Maid-servants wages, or so much as to sustain them. Verily, this is a punishment from the hand of God, and a singular one too, by which he corrects us ungrateful men. In time of the Wars, when a huge Scarcity pinched the Inhabitants of *Germany*, then the common outcry went up to Heaven, and promised largely an amendment of life; but when the War was over, and all quiet, and a most wisht-for Peace returning, then all men generally became worser, and more wicked, tho' the goodness and bounty of God had bestowed on them such a great plenty of things so exceeding necessary: And now such great Fulness being enjoyed, they now gape after Money too, and murmur against God, as the *Israelites* did, who loathing, as 'twere, the plentiful abundance of things necessary, murmured at *Moses*.

The reason why Corn is so exceeding plenty, is this: After the making of Peace, and sending away the Souldiers, many Commanders being weary of warfare, and abounding with Money and Horses, bought (or rather squeez'd out) of the poor Inhabitants, every where destitute of Money, most notable Farms, for a very mean price, and did set themselves with the utmost of their Industry to till the Earth, which had lain fallow a long time; which Lands became so fruitful that it even amazed all men. The poor Inhabitants too, who now had gotten a little Money, they also set their hands to the Plough, and used even the utmost of their endeavours in the tillage of the Earth: From hence it came to pass, that they were so furnished with such a vast deal of Corn in a few years space, that they knew not at all what to do therewith. As for carrying it into far distant Countries, the troublesomeness and charges of the Carriage were too great an hindrance: To lay it up in the Granaries, that the Air will not suffer them to do, tho' in the time of *Joseph* such a thing was done in *Egypt*, where the Air being Nitrous, dry, and not so easily subject to corrupting, as ours is, preserved the Corn from Corruption.

What I have here written, hath proceeded forth from a good mind and sincere intention, and I hope 'twill do more good than hurt. I know that the eyes of many will be opened to see what a *Babylonish* Confusion the present World is in; I pray God to be an helper to the Good, and to be a reducer of the Wicked from the course of their Impiety, into the Right way.

The Process of Concentrating Corn is this:

IN the first place, you are to make a Malt of your Barly, Wheat, Oats, Spelt, or any other kind of Grain or Corn, the which dry either in the Sun or in the Air, or else in an Oven heated a little, and not to be scorched and parched as it were after the Brewers custom; for so the sharp fume of the wood would stick thereunto, and make it black and bitter, and it may easily be conjectured, that there would be no good come of it, for by this means the smoak of the wood would stick on to the Corn and the Sprouts it has thrust forth, and are moistened, and so would make the Ale that is boil'd thereoutof unwholsome, and of an ungrateful bitter savour: But now such Malt as is dried in the Air, Sun, or in a warm Stove or Oven, has no such ungrateful taste as comes from the smoak of the wood, but remains sweet and pleasant.

NB. Else you may do thus; The Corn, after it hath sprouted and hath been thrown abroad on some Floor, open to the air, and thereby been a little freed of some of its moisture, may be dried purely and quickly too in the Brewers great Coppers, in which they are wont to boil their Ale or Beer, provided it be continually stirred about with some wooden stick without ceasing, that it may be all over hot, and so become dry. But yet you must have a care that your fire be not too strong under your Copper wherein you dry your Malt, and so burn the Corn, and make it taste untowardly; this done, the dried Malt is to be ground as other Malt which is used to make Ale withal is wont to be, but yet so, that it be not too finely ground nor too grosly; for if it be too gross, and the Grains be unbroken, the water cannot sufficiently get out the Virtues and Juice in the boiling, but that the best part will remain in the boiled Grains, and so be thrown away on the Beasts in their nutriment; but if it be ground too small, it will run into heaps, and hinder the straining out of the Ale; therefore a mean is to be observed, and care taken that no errour be committed, by either excess or defect. The Malt being on this wise prepared, every one may boil his Ale according to his custom, and so much thereof as his Vessels, Coppers, and Coolers will admit of: Some do pour boiling water on their Malt, and mix them both by stirring them well together, and then let them settle for some time that the water may take into it self the strength of the same; then they draw out that water by a Tap, and pour on more, and repeat the Infusions so often, until the water can get out no more sweetness, and there remain nothing but the insipid Husks, the which are nourishment for Cattel.

NB. Othersome that have no Vessels to extract the Virtue out of the Malt in, by boiling water, do put the prepared Malt in wooden Vessels or Tubs, and pour thereon warm water or cold, and stir it very well about, and leave it so for some hours, that the Malt may be macerated; then do they put it in a Copper, and pour thereunto so much water as may keep the Malt from burning to in the boiling; and having boiled it for half an hour, they pour it out upon a bed of straw, fitted for that purpose, and placed over a Cooler, and so strain the Ale: This Labour of pouring on, boiling, and straining, is so oft repeated, till the water sucks no more sweetness out of the malt. This manner of boiling Ale is used by those only who want store of Vessels, and pretty large ones: The former way is not only better and more commodious, but likewise more fit for the boiling of a greater quantity of Ale.

NB. This

NB. This is to be obſerved in this place, when the beſt and firſt Juice or Extraction is drawn out of the Veſſel by a Tap, and freſh boiling water poured a ſecond time on the malt in the Copper, and again drawn off by the Tap, thoſe two waters in which the chiefeſt Virtue of the malt is, may be boiled and thickened by little and little in a plain or flat Copper. The third and fourth pouring on are indeed as yet good, but yet not fat enough, and ſeeing they are not very ſtrong, are not worth the boiling away, for they won't quit the coſts of the Fire, and therefore are to be applied to ſome other uſes. Now when a man is about this work, he may ſo order his boilings, as to have ſeveral of them one after another; and then thoſe pourings on, *viz.* the ſecond and third, remaining of the firſt courſe of boiling may be poured on the ſecond courſe of boiling, in the ſtead of bare water: And ſo is it to be handled, that alwaies the firſt and ſecond pouring on (and which contain in them the chiefeſt Virtues of the malt) may be boiled to the conſiſtency of Honey in a Copper made for that purpoſe, of Evaporation; and the third and fourth pouring on may be alwaies kept for the next following courſe of boiling, and be poured on the malt in the room of bare water, and ſo are to be condenſed by evaporation in a Copper, as the firſt and ſecond pouring on were done withal in the firſt courſe of the boiling; and ſo always the 3*d.* and 4*th.* pouring on of the former courſe of boiling, is to be the firſt and ſecond in the next following courſe of boiling; and this way of proceeding draws out of the malt its beſt and chiefeſt Virtues, and leſſens the charge of the boiling: For the Coſts would be far greater, if the third and fourth pouring on were to be boiled off *per ſe*.

NB. The Coppers and Pans neceſſary for the thus reducing theſe extracted Juices to the conſiſtency of Honey, are already deſcribed, where mention is made of the Concentration of Wines. He that can't well enough underſtand me, may take the pains to come and ſee my Furnaces, Coppers, and other Inſtruments appertaining to this work; as likewiſe the manual Operation, for I cannot help him any other way. And as for a larger deſcription of theſe things, my time will not permit me at this inſtant to make it. The Juices being condenſate, are to be drawn out of the Copper by a Tap faſtened therein, or laved out, and being cool, put them up in Barrels, and ſhut them up tight, that the external air may not get thereinto; for thus may you keep them uncorrupt, even as long as you pleaſe.

NB. In your boiling them you muſt be very diligent that the Juices be not burnt to, by the overmuchneſs of your Fire, or that by being heat too hot, they boil not over; all which may be prevented by Regiſters (as the *Chymiſts* call them) deſtinated for the regulating of the Fire. This is a moſt compendious way of extracting the Virtues out of Corn, and of reducing them into a narrow room, the which if you order according to Art, that nothing of your Juices be ſpilt or loſt, 8 Barrels of Malt will yield you one full of Juice, and which contains all the Virtues that were in thoſe eight Barrels; the reſidue ſerves to fatten Beaſts withal.

NB. He who knows how to convert thoſe remains to his uſe, in another kind of way will do better, and extract thereoutof ſo much as he is conſtrained to lay out in buying his Corn, inſomuch that he can have his Juices as it were even *gratis*. But of theſe things more hereafter.

As touching theſe Juices, they comprehend in them the whole Virtue of the Corn, out of which you may when you pleaſe boil Ale, make Aduſt or Brandy-wine or bake ſpiced Cakes; for if it be uſed to them inſtead of Honey, it makes them much the ſweeter. Theſe Juices therefore are to be prepared in thoſe places in which Corn is ſold at a very mean rate, and which cannot be exported to foreign parts, and is there in ſuch great plenty, as that the Country-men know not what to do therewith, but there it lies in great Stacks and rots. Farther, they are yet prepared with greater benefit and more gain where the plenty and cheapneſs of wood is, the which yields no ſmall encreaſe and addition to the Gains.

But that the nature and condition of this Labour may be the better underſtood, the following Computation will ſhew. Suppoſe I take 8 Barrels full of Corn and bring them into Malt, then boil it into Ale after the aforeſaid way, and condenſe it into a Juice, wherewithal I fill one Barrel: This one Barrel now is far more commodious to be carried into foreign places either by Waggon or by Ship, than thoſe 8 barrels, and will bring me double or treble the profit that 8 *Medimni* (a Meaſure containing ſome ſix buſhels, or the eight barrels) of Corn. Why? becauſe the greateſt labour is already over, and there remains but very little to boil the Ale out of the Juice, as the following Example will demonſtrate.

I buy me eight barrels in that place where Corn and Wood are to be had at a mean rate, and there paſſeth ſome River or other by the place, as the *Mhene* in *Franconia*, *Nicer* in *Suevia*, *Viſurgis* in *Haſſia*, and the Dukedome of *Brunſwick*, *Albis* in *Saxony* and *Miſnia*; for in all theſe places there is abundance of Corn, and ſtore of Wood, and the price of each, mean enough in conſcience. If now one *Medimnus* (or ſix buſhels) of Corn be eſteemed at the price of one Imperial, eight *Medimni* will yield eight Imperials; the Wood will coſt one Imperial, the Labour one Florin: The juice out of the 8 barrels of Corn may be put in a Fir-Cask, as they uſe to do with Honey, that ſo in paying the carriage, it may not be accompted for Wine or Ale, but ſome dry Goods, and ſo valued by the hundred, as other dry Wares are priced; ſo then the Barrel will coſt the Carriage by Water to ſome of the Maritine or Sea-coaſt Cities, two Florins. Now if we ſum up all theſe Expences upon the Corn, Carriage, Fire, and Labour, they come to 12 Florins or 8 Imperials. But now, out of that one Barrel of Juice there may be made eight Barrels of the beſt Ale, and if you will have it ſomewhat ſmaller, then 'twill make 10 or 12, according as you boil your Ale to a ſtronger or weaker degree. However, this is certain, that one Barrel of Corn will yield more than a Barrel of good Ale; ſo that out of one Barrel of Corn may be made one and an half of ſtrong Ale. Now then, if one of thoſe Barrels of Ale yield three Imperials, the eight Barrels, which coſt the buying, and reducing into one Barrel, and the tranſporting it, eight Imperials, may there be ſold for 24 Imperials; from which the eight being ſubſtracted, the remainder of the Gains is 16 Imperials, which verily is enough upon thoſe 8 Barrels.

But put caſe the Corn were dearer, and the Carriage of the Juices to thoſe places did coſt more, and that thoſe 8 Barrels of Corn, or one Barrel of Juice, did yield (beſides all the coſts) only 8 Imperials profit, yet would this be profit enough, and may well content a Man. I forbear to mention the other benefits and profits ariſing over and above beſides this Gains; for by this kind of way is ſaved and made vendible that Corn which would elſe be ſpoiled: Beſides in a plentiful time the mean-prized Corn may be bought up, con-

concentrated and kept till a scarcity come. Nor is there any cause of fear that it will be devoured by the Mice and Rats, or be spoiled with lying, or wax mouldy, or be any other way corrupted.

Nay more, it occupies less room than the Corn would; for where one Barrel of Juice lies, there should have lain eight Barrels of Corn.

Besides, the Magistrates and Subjects may by this means reap much profit and help. The Magistrate may be satisfied by taking Corn of the Inhabitants instead of tribute. The Subjects may by the benefit of this Medium satisfie the Magistrate, and there will not need the selling his Cattle, or Sheep in the Fold, or to borrow Money upon use, and to give his Wife and Children for pledges. For there is requisite no other labour than that the Magistrate appoint a place to boil his Ale, in which the Corn may be malted, boiled and thickned into Juices. As for Wood, that he has himself and needs not lay out a farthing upon that. So now, by this means may a Country be brought to that degree of happiness as never to want Money, Corn, or any other necessary things. For where the Juices can be but brought to the Sea-towns many thousand Barrels full may be sold to those Magistrates and Merchants which send their Ships into the *East* and *West-Indies*; in which Countries may be made good Ale at any time of the Year, even in the midst of Summer, or in the Dog-daies themselves, if you have but Hops and Water at hand; the which is far better and more profitable.

For in the room of this one Barrel of Juice, there must have been stowed 8 Barrels, and yet that sometimes turns sour too, and is spoiled, the which never betides these Juices. Now such Ale prepared of the Juices by means of Hops and Water are much wholsomer than the common Ales are, because that the Fire hath consumed all the Crudities; in the boiling of the Juices or hath corrected them, and this every one will readily believe or assent unto.

Nay more, these Juices may (and that with very great profit too) be sent into those places wherein (by reason of the abundance of People there) Corn and Ale is much esteemed, as in *Holland*, and the bordering Countries. If the Ale-brewers could but once get such Juices, without doubt they would not be at the costs to brew it out of the Corn, for they would not need so much time to brew in, nor such Coppers, nor so many Mens help, all which they must necessarily have in the common way of brewing. In these Juices, there is much sparing of Fuel, (the which makes the common way of brewing Ale, more costly,) and of Men's labour which doth likewise prove chargable. Nor are we silently to pass over that great benefit which they have hereby, for that good Ale and such as will not sour may be made without any danger even in the midst of the Dog-days. Every one knows what it is to brew Ale (then,) and that the brewing is at other times sufficiently troublesome, *viz.* so to order it as to prevent the danger of souring. But now this brewing (that I mention) is void of all this kind of fear of souring; whereas the usual kind of brewings do for the most part (in the Summer season) become sour either in the straining it through the Grains, or by standing in the Coolers: but these labours are in our brewing already dispatched, and that in those places where the charges of Labourers, Wood, and Room fit for boiling it in, are not so great.

This work therefore is of mighty profit both to the buyer and seller: For the seller can afford his Corn at a reasonable rate. And the buyer need not be at any other charges in brewing good and wholsome Ale at any time of the Year save only the hire of one man that may prepare or sit the Juices, and Hops, and Water for the boiling, and set it a-working or fermenting and pour it into the Vessels. Whereas on the contrary in the common brewing of Ale there needs many mens help, huge Coppers, and wooden Flats and a great deal of room to brew in, and store of Fire which is sufficiently dear in some Countries; all which are avoided in the brewing with the Juices. Do but consider I pray what a notable and profitable thing this would be in great Cities, and especially in those places where Houses, Fuel, and Mens labour are very dear, if such kinds of Juices were set to sale; that so every Master of a Family might buy up some Barrels of this Juice, and dissolve them at his own home with Water and Hops, in a small Copper according to his pleasure, and make the said Juices into Ale, as fat or as lean or small; and as bitter or as sweet as he listeth; and then put it up in his own purified and well cleansed Vessels, and he and his, drink thereof all the whole year; and if need be, might make either Physick-drink or Spiced-ale. And would it not be much better than the buying such Ales of the *Brewers*, which are sometimes either too new or too stale, and oft-times acid, impure, not well boiled, and stinking, and instead of Hops have Aloes, Xanthium or Burr, Henbane and such like Herbs put in them. For in some places, the *Brewers* use such kinds of Herbs and the like hurtful things, instead of Hops, to make their Ale bitter, and to save a few charges in the making their drink. Therefore all such as use to drink of such kind of Beer are never wont to be in compleat health; and especially in watery and moist places they are for the most part afflicted with the Scurvy, Melancholly, *&c.* which is the usual fruits of such kind of Drinks, for they obstruct the internal parts of the body and the principal members, and stir up such Diseases. But our Ales that are made of the Juices and good Hops do not only not stir up such Distempers, but do even (by their purity and clearness) resist them, and preserve men from them; but especially if such Juices be made of such Malt as has not a smatch of the smoke of Wood, but is dried in the Air, and which are so handled in the fermentation or working of them as that all the defilements settle to the bottom; for then will you have such Ale, as doth both in wholesomness and sweetness exceed such Wines as are infected with, or have a tang of, *Sulphur*, or that grow in a soil abounding with Chalk. They dull not the head, they do not cause windiness, they puff not up the body after the manner of other Ale; they do not stop the Urine but provoke it, and keep the Belly soluble: They are Medicinal without the addition of Physical Herbs, are sweet and wholsome, and of an excellent taste, and such as the like of them cannot be made without this medium or way.

Such Ales deserve a peculiar praise, and many would there be who would drink of Ales often, could they but get such: and would leave off the drinking troubled, unwholsome, and sulphured Wines. For my own part I will make use of such kind of Ale, and Wine, in my own house for the sustaining of mine own Family.

I could mention much more concerning such Ales if the time would permit me, but I have spoken enough already. And as for what remains unwritten here, may be gotten out of, (or understood by) the things here described. I question not but that good (or provident) Masters of Families will set about this

buſineſs of preparing theſe Juices, and of ſending them into ſuch places where they may be ſold to Ships that are bound for far Countries, and ſo mightily enrich thoſe Countries with ſtore of Money that abound with Corn.

Beſides, the *Brewers* of Ale or Beer that are in great Cities will not diſdain ſuch an excellent Art, but will themſelves buy ſuch Juices at a conſiderable rate.

Princes, Nobles, and great Cities, will alſo provide (or buy up) great quantities of ſuch Juices, and lay them up in their Forts and Caſtles, and in their Store-houſes as a good Treaſure, that ſo they may have it to uſe in time of neceſſity. Nor will good (or provident) Houſholders neglect to furniſh themſelves therewith, that ſo they may have wherewithal to ſuſtain them and theirs in a time of ſcarcity.

In the time of Wars, eminent Captains and other Military chieftains will take care to have them, and carry them into their ſtrong holds, and there looſen them (or put a proportionable quantity of Water to them) and turn them into good Ale; as for Water, there's to be found (enough) of that every where, and ſo need not ſtore up that, and as for Hops that is eaſie enough to be bought.

So then, there will be a notable benefit by this Artifice to ſtrong Holds and Caſtles, and ſuch fenced Places as fear a Siege. Briefly, Words cannot expreſs the benefit and profit which will redound to all places, by theſe Juices, in times both of Peace and War.

Therefore every Magiſtrate who has a care of his Subjects health and preſervation, will worthily and with his utmoſt diligence carefully provide for the having ſuch prepared Juices, that ſo in times of neceſſity they may be at hand for uſe.

But now, ſome may object and ſay; I perceive and well ſee that this Artifice is good and profitable, but 'tis not ſo eaſie a matter for every one to purchaſe himſelf Coppers requiſite for this work? To ſuch I anſwer. 'Tis not ſo needful that every one ſhould furniſh himſelf with ſuch (utenſils); if there be in every City but one man only that is imployed thereabouts, who may buy off his Neighbours Corn and pay them their Money for the ſame, 'tis ſufficient. And if others alſo betake themſelves thereunto, there will be the more Money gotten, and the Country made the richer; neither is any reaſon to fear or doubt, but that, if he ſhall bring eight thouſand Barrels of Corn condenſed into a thouſand Barrels of Juice unto the Cities on the Sea coaſt, he will ſell it off for ready money. Will a thouſand Barrels (think you) be ſufficient (or be a drug) in ſome populous City wherein are daily drunk ſome thouſands of barrels of Ale? Verily he that ſhall expoſe to ſale in ſuch a like City many thouſand Barrels, would not ſtay long there, but would be loaden (or furniſhed) with ready Money for the ſame, by thoſe who knew the Art of making Ale with ſuch Juices.

I do verily believe that it would be altogether much better to ſell Corn after ſuch a manner, and ſo to have profit by it, than let it periſh with lying; which is a great ſin before God, and a ſhameful diſgraceful thing before Men.

But further, It may be objected and ſaid. If this Artifice of making Ale were ſet up in thoſe places, in which there is wont to be a certain Tribute paid the Magiſtrates for every Barrel (of Ale,) it would not be allowed of, becauſe by this means the Tribute or Cuſtoms due to the Magiſtrates would be diminiſhed. This inconvenience is eaſily prevented, if the Magiſtrate impoſe the ſame Tribute of Ale on the Juices. For by this means the Tributes or Cuſtoms would not be at all diminiſhed, but be equally as profitable upon the Juices, as upon Ale. The like may be done with the condenſate Juices of Wine.

So then 'tis clearly evident, that there cannot poſſibly ariſe any detriment from theſe Juices, but rather infinite profits and commodity. And therefore every Magiſtrate ſhould ſeriouſly cauſe his Subjects to make theſe kind of Juices of ſuch Corn as they cannot ſell, and inſtead of ſpoiling it get riches by it. Certainly this would be far better, and far more profitable for ſuch Subjects as are very poor and go miſerably tattered and naked, and have nothing to help themſelves (of which ſort there are not a few.) Verily there would be no want of any thing, but the Subjects as well as their Rulers would have enough: And for this reaſon have I willingly undergone this trouble and this labour in manifeſting and laying open this Artifice.

And although I am not to expect any reward from any body for manifeſting a thing of ſo much concernment (for this is an unthankful World) yet have I obeyed the will of God and have out of a Chriſtian love benefited my Neighbour, and in this well-doing do I reſt, no ways doubting but that God the rewarder of every good (action) will recompenſe in another place, this my well-doing which I beſtow upon the World.

Farther, I can in a kind of a Prophetical manner predict, that if regard be had of this my wholſome Doctrine and Admonition, many Countries will in a very ſhort time recover their former happineſs, and both the higheſt and loweſt will live in a proſperous condition; but eſpecially thoſe who firſt ſet upon this buſineſs afore it becomes common, will get great riches. Now then, whoſoever they be that by the help and benefit of this way ſhall get the bleſſing of God, let them not forget the poor, but beſtow that bleſſing on the cherriſhing and comforting poor Orphans and Widows, to the Honour of God. For the Treaſures and Riches in this temporal Life cannot be better laid out, and laid up, than in diſtributing them amongſt the poor. For by that means there's no fear of being ſpoiled of them by Thieves and Robbers; And more, in the Life to come, they ſhall be recompenſed with a ten-fold reward.

CHAP. III.

Of the Concentration of Vegetables.

WE have already taught in the two foregoing Chapters by what means Wine and Corn are to be by an Artificial condenſation reduced into a narrow compaſs, and brought to be a gainful Merchandice. It now remains to ſhew the way conducing to a condenſation of the Virtues lying hid in Herbs, Buſhes, Shrubs, and Trees: (which Vegetables do moſt plentifully abound in moſt places and yield no profit) that ſo even out of them as well as from Wine and Corn may be reaped a very great profit. No body is ignorant of this, *viz.* That there is nothing more vile and of leſs eſteem than the Graſs (or Herbs) of the Field, and Briars or Buſhes, and Shrubs, and lofty Trees too, eſpecially when being at a good diſtance from Men's dwellings they cannot be applied to any uſe, and upon this account are they not valued at all,

nor

nor by reason of their distance profitable to any, but there they grow and perish in those vast woods and desart places. And this is to be seen in those most huge Woods of *Germany*, such as are the *Ingriones*, the Wood *Ardenne*, the *Ottonicane*, *Hercinian*, *Semane*, and *Bohemian* Woods, and the woods of other Countries, in which woods there rots and is spoiled above tentimes more wood than men make use of.

Now no body hath hitherto known what use to put those Woods unto; such Woods as are not too far off from Cities or Villages, do Men make use of for building, for firing, for boiling, or brewing, and for baking, and other occasions, so that the Wood which is daily used, and every year fetch'd from the bordering Woods or Forests, is thereby saved from rotting and being spoiled.

But as for such wood as is in Mountains and Woods scituated far off from mens dwellings, and which are not frequented, that is not of any use at all, they are Dens and lurking places for cruel Beasts, as Bears and Wolves; which said wild beasts do annoy and hinder other profitable ones, as Staggs, Does, Boars, Hoggs, Sheep, *&c.* from feeding on the wild Fruits of such places. But who is there will amend it, and bring such places to a due or good use? What! should such vast Woods, which are the receptacle of those cruel wild Beasts be cut down and lie a rotting, or be consumed by Fire, so to destroy those wild beasts? Surely no body will attempt it, as fearing the toilsomness requisite hereunto: And besides, forasmuch as no other profit is to be thereby expected, save an extirpation of those wild beasts, there's no body will take that Task upon him. Nor is it a thing so behoveful to Fire, and burn down such huge Woods, as we read in History, that some have heretofore done, *viz.* most great Woods have been burnt, meerly to destroy Insects and other hurtful, wild, and ravenous beasts. There is an hazard run in so doing, for such a Fire may spread wider, and do a great deal of mischief.

There are such Examples which may be produced, which witness how that Fire being put to Heaths, have (by burning thereof) crept into the bordering Woods and destroyed them, and mightily injured the neighbouring Inhabitants: And therefore 'tis not so advised a Work to consume Woods by Fire; and to cut them down, that so they may lie and rot, and be thereby rooted out, cannot be done, because of the great costs thereto requisite.

So that such places must of necessity even remain the Receptacles of hurtful Beasts and Thieves; for albeit that sometimes the Glass-makers do in suchlike places build their Furnaces or Glass-houses, yet they fall far short of consuming so much Wood by their making of glasses, for those Woods are scarce the thinner or lesser for that: Tho' they spend daily in every such Glass-house twenty loads, yet such a vast quantity as that is, will not decrease. Besides, the Glass-men do not use all the wood without making any difference, but make choice of the streightest and smoothest wood, such as they may best and easiest cleave: As for shrubs and knotty *Oaks* and *Beach*, those they touch not. So then the best Trees only are used about their Glass Works, and the bushy woods, as *Briars*, *Thorns*, *&c.* and which are the most commodious hiding places for the wild Beasts, are unmeddled withal, as being unprofitable for the Glass-makers: Nay, they let most curious arms or branches of *Beach* lie a rotting, and make use only of the body of the Trees. Moreover, in such Woods as are far off, the Glass-makers build no Houses, but do erect them as near as possible they can, to such places as are inhabited, because they must of necessity have commerce with men.

Farther, 'tis not a little wood that is spent in the Mines about Metals, especially in such Mines where Iron is molten; but what we said but now touching the Glassmen, the same is to be observed here; for such metal-melting Houses are never erected on the high Mountains, or are built in far remote Woods, because they must have the assistance of Men, and water to drive their bellows-mills, and besides the place must be such, as that all Necessaries may be brought them in Waggons, and their Iron transported into the Cities or Towns. Nor do the Metal-melters indifferently use any wood they meet with; nor make they their Charcoals of every kind of wood, but leave the shrubs and bushy woods as unfit for coaling. And therefore those great and vast woods, tho' there be Glass-houses and Metal-melting-shops in many places, do remain untouch'd, because no body knows the use of them.

But now, forasmuch as I have all my life-time most accurately search'd by a diligent observation into the wonders of God, and have not spared any labour or costs about the secret wonders of Nature, and have learned from Nature her self, my instructing Mistriss, that God being a true and just Lord over his Family, did neither do, make, or create ought without certain and just causes, which notwithstanding is not regarded by the most part of us men, who imitate the irrational beasts, and alwaies live without the knowledge of God and of His Works. Verily, we have no colour of Reason at all for it, not considering that men were created and appointed by God for another-guise end, than the brute beasts, which are void of all Reason; and we regard not the Truth of that old Saying, *God and Nature never make any thing in vain.*

So then, whereas this is a Truth (as assuredly it is) certainly we may see that these huge Woods were not in vain made, but that they have some benefit (for so they have) *viz.* a most great Treasure for such who know it, and know how to use it. Which I will therefore shew, as clear as the Noon-day Sun, and will so set it afore the eyes of the blind and darksom world, that the Deriders and Contemners of natural Philosophy, such as is to be Learned only by the fire, and not out of *Aristotle*, may be even enforced, will they, nill they, to confess and grant that the Fire is the true Teacher and Master of natural Arts, and so will be; for whosoever they be that are Ignorant as to the Fire, and that know not its wonderful efficacy, tho' they may be most skilful Proficients in foreign Tongues or Languages (which in the more-secret Philosophy makes not at all to any purpose), yet nevertheless they will not be able to accomplish any the least matter in things of so great a moment: I do therefore say, that such men as are skilled in natural things, are not of right to be contemned, or secretly back-bitten by those who say, Believe not such a man that hath not attained the empty vain Title of a Doctor in the Universities. I confess ingeniously, that I never frequented the Universities, nor ever had a mind so to do; for should I have so done, haply I should never have arrived to that knowledge of Nature, which I mention without boasting, as I now possess; neither doth it ever repent me, that I have put my hands to the Coals, and have by the help of them penetrated into the knowledge of the Secrets of Nature; I do not desire to disturb any one in this way, or to thrust any out of their places; I never was willing to live on the costs of great men, but have with my own hands gotten me my Food and Raiment, alwaies advisedly thinking on that most known Verse; —*Alterius*

——*Alterius non ſit qui ſuus eſſe poteſt.*
Let not him anothers be,
Who can of himſelf live free.

But to return to my concentration of Wood, I can with truth affirm, and will experimentally demonſtrate it, that the greateſt Treaſure of the World; yea, as great or greater than is in Wine or Corn, lies hidden in Wood. VVine and Corn do require the Labour of Man for its growth out of the Earth; but Leaves, Graſs, Briars or Buſhes, Shrubs, Twigs, all ſorts of Trees great and ſmall, do come forth out of their ſeeds and ſprouts and grow up and encreaſe infinitely without any help of man at all.

Therefore I ſay that more profit may be reaped of VVood than of Corn and VVine, were the Art of extracting thencefrom ſo great a benefit but known to any.

So then, foraſmuch as this little Book (as being the firſt part of the Treatiſe of concentration of things) treats of the emendation of Vegetables only; and that of VVine and Corn is already finiſhed; I will now in the name of God ſet about VVood, Leaves, and Graſs, and lay open thoſe moſt great and hitherto hidden Treaſures and Riches, and ſet them forth before the Eyes of the whole VVorld. And I pray God, the Omnipotent, VViſe, Unſearchable and Merciful Lord and Father of all Creatures in Heaven, in the Earth, VVater and Air, that he would ſo govern and guide my hand that I may here write and teach nothing ſave only ſuch things as ſerve for the Glory of his Divine name and the health of all Mankind. *Amen.*

VVe have ſhewn in the two foregoing Chapters how VVine and Corn are to be condenſed into their Juices, that ſo they may be commodiouſly ſent into thoſe places, in which profit may be gotten.

Here now falls in this queſtion, How the Juices are to be ſqueezed out of Herbs, Twigs, Shrubs and great Trees, and being preſſed out what good they ſerve for, ſeeing they are not of uſe for meat and drink like thoſe which are extracted out of Corn and VVine.

To this queſtion I make this reply, that indeed there is not any food to be prepared from them, but that yet other things are thence preparable, and ſuch as men cannot be without, *viz.* VVholeſome Medicines, and likewiſe Gold and Silver wherewith a man may alſo buy, beſides VVine and Corn, other neceſſaries as Garments and other appurtenances which men ſtand in need of, beſides meat and drink.

But to begin the work it ſelf, we ſhould in the firſt place teach the way how Juices may be ſqueezed out of Leaves, Graſs, Shrubs, and then afterwards ſhew their uſe. But foraſmuch as none is of ſo weak a judgment as to lay out Moneys or things valuable, and to beſtow his labour and ſweat on ſuch a thing whoſe uſe and profit he is ignorant of; 'tis therefore neceſſary, that (before we come to teach the way of ſqueezing out the Juices) we firſt ſhew, what benefit and profit ariſeth from that kind of work; that ſo a Man's labour may not be ſpent in vain: To give ſatisfaction herein, I affirm, that the greateſt and beſt virtues of all Vegetables are hidden in a certain Salt which the Phyſicians and Philoſophers call the Eſſential Salt. Of this Salt all Vegetables are full, but yet, one fuller than another as experience teſtifies. Such Herbs as have not much taſte, as Lettuce, Coleworts, Rapes and ſuch like have a leſs portion thereof, and are therefore eaſily putrefied. But ſuch as are ſharp and bite the Tongue, as *Water-robbin*, *Arſmart*, *Laurel*, *Pepper-wort*, *Scurvy-graſs*, all the kinds of *Creſſes*, all the ſorts of *Radiſhes*, *Leeks*, *Onions*, *Garlick*, *Muſtard*, and ſuch like; alſo all bitter Herbs, as *Carduus benedictus*, *Wormwood*, *Fumitory*, *Eſula*, *&c.* all ſuch as theſe are full of it. Beſides, all ſuch Vegetable plants as are naturally ſour, yield much of that Salt; amongſt which, may be reckoned, unripe *Grapes*, ſour *Apples*, ſour *Cherries*, Wild *Plums*, rough (or wild) *Grapes*, the unripe *Mulberries* or *Black-berries*,) the unripe *Barberies*, *&c.* But yet ſome of them yield more, others leſs Salt; which inequality and changableneſs is accidental, for they are as to their natural foundation like each other.

NB. Some Herbs and chiefly thoſe which have a notable bitterneſs, as *Cardunsbenedictus*, *Wormwood*, *Fumitory*, do (after their being ſqueezed, and when their Juice is depurated, and the Phlegm draw off, and the remaining Juice concreted or condenſed in the cold,) yield natural Nitre, and ſuch as being put upon a burning Coal will preſently burn up in a flame, like the common Salt-petre which is uſually extracted out of the Earth digged in Stables, and ſo concreted, or cryſtallized): As for other Herbs and Fruits which are not bitter, but have a piercing ſharpneſs, as all the *Creſſes*, they (after their expreſſion or ſqueezing) yield a volatile Salt, which does not burn like that which is drawn out of bitter Herbs: Such as have an acidity in them, as *Sorrel*, *Barberries*, *Ribes*, curled *Grapes*, wild *Apples* and Orchard ones, and other unripe Fruits, do yield another Salt, *viz.* a Salt taſting like the acid taſte of Wine, and reſembling Tartar of Wine, in taſte, virtue, efficacy & propriety.

And now albeit that theſe three kinds of Salts are unlike in taſte, yet nowithſtanding the one is moſt eaſily tranſmuted into the other, inſomuch that Tartar may be made Salt-petre, and Salt-petre Tartar. The third ſort which is more volatile than the others, and which proceeds from the *Creſſes*, *Muſtard*, *Aron*, *Pepper-wort*, *&c.* will eaſily be turned into either of the former.

But as concerning this laſt, it is virtuous in Medicine, as I have hinted to you in ſeveral places in my other Writings, but (ſet aſide its Medicinal uſe) and it is of but little benefit. The two latter, *viz.* The Nitrous, and Tartarous are of various uſe. The Dyers uſe Tartar in Dying their Cloths, and Salt-petre is uſed to make Gun-powder withal, and for the Tranſmutation of Metals, and other ſuch like Arts, as I have clearly proved in my Explication of my *Miraculum Mundi*. Foraſmuch therefore as both ſorts of Salt are uſed in great quantity throughout the whole World, and that there can ſcarcely be had ſo much as ſerves for neceſſary uſe, and upon that account are always good Commodities, and that Salt-petre is twice the value of Tartar, therefore 'tis but fitting, and well worth while to extract Salt-petre out of the Juices of Herbs and Trees, it being of more value, and better price than other Salts. But if it ſhould ſo be, that there ſhould be ſo much Salt-petre as that it ſhould be of a poor price, then may the Juices be turned into Tartar. But foraſmuch as it will not eaſily ſo happen, that there ſhould be ſuch a glut of Salt-petre, it will be the beſt way, to improve thoſe Juices on the making of it; and ſpecially becauſe it may at all times ſerve for the profitable bettering of Metals; nor can ever ſo great a quantity be produced, but that it will ſometime ſell off. 'Tis more profitable, and better to uſe it for the bettering of the meaner Minerals than to make Gun-powder with it; and were not that moſt pernicious Art already too well known, it were better to be without it, than to make it, ſo far ſhould it be (from any one) to deſcribe the manner of making Gun-powder. But

But forasmuch as neither my desire nor will tends to be any occasioner of hurting my Neighbour by the help of Salt-petre, but inclines rather to benefit him thereby; and to this end I have already clearly enough discloſed many most profitable Arts which proceed therefrom, *viz.* in my *Miraculum Mundi*, and in the Explication of the same, and moreover shall do in the following third and fourth part of this Book, about the bettering and concentrating of Metals: I am, verily, confident, that none will interpret it in the worst part, if I shew the way of making Salt-petre out of Wood and other things; that so, our Country may by the benefit of (such) Herbs, Grass, and Wood, which otherwise, ly a rotting, and are of no profit, be enriched (if it be only sold) with abundance of Treasure, and may afterwards be spent on most profitable Arts, as may be seen in the *Miraculum Mundi*, and in the Concentration of Minerals and Metals. So that he that would not make it into Gun-powder, has no need so to do.

Besides these Virtues of Salt-petre which we have reckoned up, there do daily more and more new and admirable ones spring up out of the dark, all which, were they here to be summed up they would even draw the whole World into an admiration of them. But we will forbear to multiply more words concerning things of such moment; for it may easily be perceived from what has been hitherto demonstrated, and from those Publications I have made (by my Writings) that many more, and greater things lie hidden in this Subject, which neither I, nor others know of. Deservedly therefore may Salt-petre, or Nitre, be termed an Universal Subject, and Wonder of the World, notwithstanding many rude and unskilful Fellows, will upon this saying, shrink up their Noses, and audaciously contradict me (and say) that Nitre is not the true and Universal Dissolvent.

But if Nitre be not that Universal Subject, then let those that prate against this Judgment or Opinion of mine, produce another and better Subject; which, yet, in my Opinion they will never be able to do. If it were not an Universal Subject, how comes it to be so plentifully found to be in all things. Is it not found in all Vegetables? Is it not in all living Creatures that live either under the Earth, or in the Waters, or in the Air, or on the Earth? Is it not met with (or found) in the inmost Bowels of the Mountains, and even in the most hard Stones? I will demonstrate it in this small Treatise by most clear Arguments, and will most evidently evince it.

In the first place, that all Vegetables have it, is already clearly demonstrated and proved, for I my self (and I am the first, as I know of) made trial and turned their Juices into natural Salt-petre. But I will now so evidently shew the truth of this thing, that even those blind Back-biters and Detracters shall feel it with their hands.

In the first place therefore, I demand, whence the common Nitre is gotten? Is it not out of the Earth, which is digg'd out of the Stables where Beasts stand? For it has insinuated it self into (or joined it self with) this (Earth) passing out of the Excrements of the Beasts in length of time, and hath coagulated it self therein, out of which it is at length drawn by pouring on of water, and then is boiled up into Salt-petre. Who can deny this? I think no body can. So then if this be granted, that Nitre is found in the Stables where Cattle stand, the Question is, By what means, and way it came into the Stables? It is by the help of the Urine and Excrements which the Beasts have there cast forth. Then again, I ask whether or no those Beasts have those Excrements from their Meat and Drink, or from elsewhere? They cannot arise from water, forasmuch as they drink nothing but Water: So that they must necessarily have their rise from the food they eat, and that consists of the Vegetables, Grass, and Herbs. Therefore we affirm, that the Salt-petre was of necessity in these Herbs, and Grass, afore the Beasts feeding on them. For if it had not been there it could never have been made in the Beasts Bodies that which it was not afore. For their Stomachs contribute nothing to this Operation, save a bare putrefaction. And besides, the Countreymen do even the same thing, for they gather up Stubble, the Leaves that fall from the Trees, the Grass, and such like things, and put a great quantity of them into a Pit together, and there leave them so long, till by the help of Putrefaction they are all turned into Dung, and therewith do they afterwards Dung their Ground (in such wise) as is wont to be done with the Excrements of Beasts. Therefore, forasmuch as that putrefied Grass and Stubble doth dung the ground and render it fruitful, (as well) as the Excrements of Beasts, it must needs be granted, that they have likewise Salt-petre in them. For it is not the Dung, but the Nitre in the Dung, that is, the Author of that Dunging Impregnation and Fertility, as I have already confirmed by Arguments in my *Miraculum Mundi*, and which will be sufficiently convincing proofs here in this place.

I would therefore fain see that Man that dares be so bold and heady as to deny this thing, that the Essential Salt neither is, nor can be made, Nitre.

And now we come to treat of the Beasts in the Fields, of the Fish in the Waters, and of the Birds in the Air, that so by a thorough examination of all these sorts we may see, whether or no they are enriched with Salt-petre, and whether or no their Essential Salt be like the Essential Salt of the Vegetables, and can by the same means pass into Nitre.

In the first place, and above all, this is here to be considered, as a main principle, (*viz.*) That all those things which dung the Fields and Lands, and fatten them, most necessarily contain in them Salt-petre. For from this only, and alone, comes all the fertility throughout the whole Earth, which Axiome cannot be gainsayed. But now, that the Animals, or Beasts, Birds, and Fishes are Partakers of the same Virtues, I firmly gather from hence.

First of all, it is not unusual for the Gardiners to put the Horns, Hoofs, and Bones of Beasts, to the Roots of Trees, and so cover them over with Earth, and that on this account, because they make them exceeding fruitful. This now is every where used: Likewise the Gardiners do every where buy up Hens Feathers, Hens, and Pidgeons Dung; as also from the Tanners and Curriers the Offals or Shavings of the Beasts Skins, and their Hairs, and use them to enrich their Gardens. The Vine-dressers also buy up the shavings of Horns of the Comb-makers in many places where they can get them, by which, they fatten their Vines, far better than with Dung, and that lasts for nine or ten years. The Gardiners do likewise buy up from the Tailors, bits, or pieces of Woollen and Linen to dung their Gardens when they plant Colworts. If they did not find any Nitre, or Fertility in them, to what end would they lay out their Money on so base a Matter? To the Ignorant and

Unskilful, these things may seem wonderful and incredible, because such a kind of dunging Land is not every where in use. He that is incredulous, let him go to *Colen* on the *Rhine*, and there he'll find that I have spoken nothing but the truth. All these things do the Gardiners make use of according to their ancient custom, for from their Predecessors learned they these Secrets. Nor know they what other reason to alledge for their doing this, but only tell you, that they serve exceeding well to enrich their Fields and Vineyards.

But I do assuredly affirm, that 'tis the Nitre that is hidden in these things, performs this effect: There is therefore far more abundance of Salt-petre in the Superfluities (as Nails, Horns, Hair, *&c.*) than in their Excrements, or Dung. And I thus prove it.

First, Because they will give you for one Sack full of the Shavings of Horns, half an Imperial, which is as much as will buy four or five such sacks full of Cow, or Sheeps dung.

Secondly, They will give the Tanners, or Curriers, above an Imperial for one Cart-load of the Shavings of the Hides, whereas with the same Money they may buy three or four Load of dung. Rags are sold for a quarter of an Imperial. Were they not virtuous or effectual, why should they be so dear? This here spoken, we have proved so to be, by the customary practice of the common men only, as Husbandmen and Gardiners. Were it lawful for me to reveal somewhat to the purpose, I could teach how to extract out of every hundred weight of Bones, in Beasts, Birds, and Fishes, ten pound of Salt-petre. But this is not to be divulged.

Now it remains in the next place, to confirm, that Nitre does not only lie hidden most plenteously in the Vegetable and Animal Subjects, but that it may be digged, or gotten out, and prepar'd of Stones, Rocks, Cliffs, Hollows of Mountains, and out of the plain Field in a very many other places; and this is undeniable, for 'tis evidently known, and if need were, I could, for witness sake, make mention of many such Testimonies. He that is desirous of knowing more, as touching this salt of the Earth, let him peruse the ancient Philosophers. But forasmuch, as every one hath not those Books at hand, and that many Men cannot understand them, I will for Amplifications sake add yet one demonstration, to shew whence that Nitre ariseth, which sticks on to, or swells out of those moist and old Walls of Houses. Comes it not from the Mortar, with which the Bricks are joined together? Not only all *Stones* are fit for making Calx, or Lime of, but also all kinds of Stones, which break, or grow in the Waters, like Drops, or Pebbles: Likewise, those stony things which grow in the Sea, as Coral, the Pearl shells, or Mother of Pearl, and Shell-fish of all sorts, which being burnt, moulder in the Air, have in them plenty of Nitre, and will easily yield it forth to those who have the way of extracting it disclosed unto them. But this is not the place to mention it in, because I have determined to treat here, of only expressing the Juices of the Vegetables, concentrating them, and making them gainful or profitable.

Forasmuch as we have hitherto understood (or shewn) that Nitre or Salt-petre may be had from all things, *viz.* from Herbs, Wood, fourfooted Beasts and creeping Things, from Birds in the Air, and Fishes in the Water, yea from the very Elements themselves, as Earth, Water, Air, and Fire; It must needs follow that it is that so much spoken of Universal Spirit without which nothing can either be or live: It is the begetter and destroyer of all things; in which all things are, as I have demonstrated in my *Miraculum Mundi*, out of the most ancient Philosopher *Hermes*. I therefore hope, that no body will any more doubt thereof or oppose himself with a perverse stubbornness against a truth so manifestly known. Were not the shortness of time an impediment unto me I could most easily produce more arguments and those too more pregnant. If any one is minded firmly to cleave to his own stubborn perverseness, even *Hermes* himself should he arise from the dead, would lose his Labour in teaching him; and therefore let them keep their contumacy to themselves.

We have sufficiently confirmed and that by arguments enough, that Salt-petre is an universal Subject, and every where to be found. Hence it may be easily believed that it may also be met with in woods, and that more strong, more powerful, more corporal, palpable, and visible than in any other Subject: Upon this account therefore is it to be also sought for, and drawn forth out of them too. But forasmuch as such an Extraction cannot be made afore that the Juices are prest out of the Wood, out of which Juices the Nitre is to be drawn forth, the whole Art consists in squeezing out these Juices, but yet by another kind of way than is done with Herbs. Therefore the due Presses being fitted ready, I shall be able to shew him who requesteth it at my hands (so as he does not endamage me) the way of squeezing them. For to prostrate a work of such great moment to every ones view, whereby those that are unworthy, should partake of such great Secrets, and by which a thing of so much value should be obnoxious to a common Abuse, is not verily, either necessary, profitable, or laudable. Let not any one therefore take it amiss, that I have so careful a regard of things so considerable. Let it suffice, that I have detected the thing, wherein such great Treasures have hidden themselves, which hitherto are profitable to no body, but are easily acquirable, or to be had. Do but look a little upon those most vast Woods of *Germany*, which are stored with such mighty abundance of Trees, that wood is of no account. There hath been none as yet that has converted them unto their use, save a few, who in some places make Pot-ashes of the wood they burn; and yet they have but small gains therefrom, because they can't have vent sufficient for as much as they could make by their burning the wood, nor do any use them, but Soap-boilers, and Dyers.

Besides, I never as yet saw the Man that duly attempted that Artifice, and so administred it as to get therefrom a greater gain. For sometimes they gather scarce an hundred weight of Pot-ashes out of the burning of ten or twenty great Trees, and they can hardly have above five or six Imperials for it. And now consider but the great Labour and Sweat in burning so much Wood into Ashes, and of boiling the Ashes into a black Salt, and then of making this Salt red hot in peculiar Furnaces, that it may become white, green, or blueish; all this consider'd, 'twould make a Man admire what 'tis that could stir up those that follow this work, or order it to be done, to suffer such a quantity of Trees to be burnt up, for so very little profit. But what need many words? They have the wood for nothing, and (as the Proverb runs) *The half White of the Egg, is better than the empty shell.* Haply if they knew how to make any thing better, or more profitable out of their Wood, they would not omit so to do.

How many hundred weight of wood, are they to burn

burn afore they have one hundred of Pot-ashes? But now if the Juices that are squeez'd out of them were boiled into Salt-petre, they would get ten times the profit with far less trouble.

Let us compute the case, and suppose that out of an hundred pounds of Wood, there are squeezed forth twenty pounds of Juice, and that from these twenty pounds of Juice, you have some 4 or 5 pounds of Nitre, and that a midling Oak or Beach will load, when cleft, some ten Carts, and each load hold twenty hundred weight. Now then, one hundred yielding five pound of Nitre, a load of twenty hundred, yields an hundred pound of Nitre; the Tree that is about ten load, yields a thousand weight.

Now we'll put case that a hundred weight of Nitre yields twenty Imperials, which being ten times multiplyed, makes two hundred Imperials for ten loads, or for that one Tree divided into ten loads.

But to wave so accurate a computation, and not to extend it too far, we will suppose a hundred of Wood to hold only three pound of Nitre, and a load to be about twenty hundred of Wood; this load will yield Sixty pounds of Niter, and the Tree ten loads, so there will be Six hundred pounds of Niter. If now one hundred (of Nitre) will cost ten Imperials, that Tree will yield sixty Imperials for the six hundred pounds of Nitre. The smallness of the cost (in making it) makes the labour the more profitable; nay, if by this invention of mine, the price of Nitre should fall down, even to ten Imperials (which notwithstanding, will not so easily come to pass) yet would the gain thereby be great, yea ten times more than that which comes from the Pot-ashes. But he that knows how to use this Nitre, for the concentrating of Metals, (concerning which the three following parts of this Book shall treat) will not have any cause of fear, that this Nitre will lie on his hands and yield him no profit.

By what hath been said, the well-minded Reader will easily perceive what vast treasures are oft-times before his eyes, and through ignorance lie as yet unknown, and not used to advantage. What man knows God's end, in producing to light such great Mysteries and Secrets of Nature, in this most filthy Dregs of the World? To give thereof a Reason, we will not tire our understanding, but give most humble thanks to God for such great mysteries that he hath revealed for the comfort of many men, and will pray unto him graciously to bestow on us his fatherly blessing, to the end that we may well use such great gifts so freely bestowed.

But now if any should be of the mind that it is wholly unnecessary, that this Art should be made publickly known, because that Gun-powder is made of Salt-petre, and that by Gun-powder many Cities and most strong holds are overthrown, and nothing is to be expected thencefrom, but Slaughters and Destruction: To such, I answer, That it was not for this end that I disclosed this most great and most profitable Art, that by its base abuse I might help on these horrid Calamities; but my aims have been chiefly at this, if haply any new Foreign Enemies should invade our most dear Country (which is a danger we seem not far off from) we might be able to receive them with like Arms or VVeapons, and by a just defence drive away such a Calamity.

And withal, that those most thick and vast VVoods being despoiled of their thickness, may not for the time to come be a shelter fot Thieves and Robbers, as likewise for wild beasts, all which oftentimes do much mischief.

And farther, That many thousands of Men may get their Food and Rayment more Commodiously and more easily, and may make good Gold and Silver from the unprofitable VVood. For by means of this Art, thousands of moneys may be gotten in our *German* Countries, without any hurt to our Neighbour. Nor is it needful to cut down any great Tree, for the superfluous Branches or Loppings, and the shrubby briary Underwood which is all about the Trees, and doth chiefly afford a passage to the Stags, and hiding places to other hurtful Creatures, will be sufficient for this kind of use or imployment.

The other Trees that grow up aloft may be preserved to build Houses withal, which may be employed about Hunting: And besides, when the Trees are freed from that thickness, and have thereby a free access of Air, they will the more easily dilate their Boughs, and grow up taller. And then too, those wild Beasts that are profitable, will (when such vast deal of underwood or shrubbiness is taken away) meet with fatter pasture, and with more plenty of Grass, and escape by having a freer Course from the pursuing VVoolves, which now they are letted from by those most thick Shrubs and Bushes. But yet if so be that in such places in which is such a deal of VVood, and to no man useful; a good part even of the great Trees should likewise be cut down, and used about this Artifice of ours; yet notwithstanding there would not arise to the Possessors thereof any loss, but much Profit; and when all's done, there would be yet remaining a huge multitude of Trees. Consider I pray those most spacious VVoods the *Arduenne*, *Ottonick*, *Semane*, and *Bohemian* VVoods, and many others which the Countries in *Germany* are cloathed (or environed) with.

Can it be imagined, that they can at all be lessened by the Glass Furnaces, or the melting of Minerals and Metals.

These places that are one year bared by cutting down the Trees, you shall see in few years covered over again, by the benefit of nature, with new Trees; so that it cannot possibly be, that though even a very great many Presses should be used to press the Juices out; such a vast immensness of Woods should be exhausted, and make any sensible diminution of the Wood.

But now, if any one shall believe these writings of mine, and shall, after the afore-mentioned way, set about the Concentration of Wine, or Corn, or Wood; I do faithfully affirm unto him, that I have in this Book openly proposed the very naked Truth, without any dissimulation, and have not omitted any thing save the revealing of the Presses, which for certain causes I conceal.

And therefore I certifie every one, that I will not as yet divulge this most wonderful secret, of thus-boiling Nitre out of the Juices of Wood, or else I would have described the Press too. Besides, though a man should even see the Press, and know how to make it, and were ignorant of the purification and concentration of the Juices, he would not bring the Art to effect; so that, without my instruction, the work cannot so easily be made publickly known. And though this seems to be a thing so mean, yet this squeezing out of the Juices of Wood, is far beyond (or richer) than the operations on VVine or Corn. But I doubt not but that many, well considering of this unheard of, and very gainful Artifice, will begin to think whether or no good Nitre may not likewise be gotten out of other Subjects easie to come by. Now then I must methinks needs instruct these. The

The common Fossile Salt, and Sea Salt may by the benefit of this Art, be also turned into Natural Nitre; but I judge it needless to speak more of this, for as much as that which I have already mentioned concering the Wood seems abundantly enough. Breifly, God doth in all places set before our eyes His Omnipotency, where he gives not VVood, there vouchsafes He Stones and Bones, out of which Nitre may as well be extracted, by those that are skill'd in this Art, as it may out of other things. And where Fire is wanting, there is VVater however. But I know that it is certain, and past all doubt, that by the certain experience of Art, plenty of good Nitre may be made out of Sea Water.

Now if any shall object and say; Thou affirmest that Nitre is to be found in all places of the VVorld, but especially in Wood and Stones; but yet, that there are many places which have neither VVood or Stones, & have only a Marshy Moorish Soil, which brings forth Grass only: By what means can Nitre be there, or in what things, or what places should it be sought for, thinkest thou there?

I answer; I have already, in what hath been said afore, confirmed, that Nitre may be drawn in large quantity even out of Grass; but verily there's no such need here of so doing, to rob the beasts of their food, and to use the Grass about Nitre-making: For the Cheese and Butter that come from the Grass, will easily yield more than the Nitre that's made thereof, would; God deals not so unjustly or unwisely with the Creatures as to give his blessings with a liberal hand to one, and take the same away from another: No, no; The Treasure of his Riches is inexhaustible, and he gives his Creatures largely to partake of them; nor doth that axiome (or maxime) which is so very usual in this perverse World, prevail at all with him, *viz.* The fall of one is the rise of another; but his will is, that all should have their necessaries abundantly supplyed, that every one should have enough, and that every thing should come to perfection. Therefore it is not at all necessary, that Nitre should be extracted out of the Food which the Beasts live on, because it may easily be extracted out of other Subjects which which bring not any profit to Man or Beast, and this in great quantity too. For in such plain low Countries and moist watery grounds, where you shall not meet with either Mountains or Vallies, or Stones, or Wood: The most gracious God hath, like a provident and wise housholder provided for the inhabitants, giving them a certain kind of earth inlaid with many Roots and Fibers that grow therein, which the *Dutch* call Torf, we *Turfs*, the which they use instead of Woods, to boil with, and about other necessary uses; so that they may easily be without the wood, which is yearly brought them in such vast quantity out of other Countries. Now these same Turfs contain in them the like Essential Salt as Wood does which Nitre is extracted out of.

As concerning Stones, they do not in those places shew themselves to sight (as lying deep) if you except such as are burnt (or Bricks) and which are brought hither to build houses withal, yet God hath bestowed on them a matter sufficiently apt to make Lime withal, so that they may be without, even Stones themselves. The Shell-fishes of all Sorts (serve to this work), and sometimes the raging of the Sea, drives the Fishes shells ashore by heaps, and like little hills, the which being carryed by the Inhabitants into the Cities and Villages, they put them in the Lime-Kilns, and reduce them by a strong fire into good Lime, and that by means of the Turfy fireing we mentioned but now; so that I do not see any reason why, in these Countries that are destitute of Wood and Stones, there should be found less Salt-petre than in others, in which huge quantities both of Wood and Stone are found. Nay, rather I affirm, that there is more there, than is in almost any Country of *Europe*; for do but compare the price of Turf and Wood, the Wood is dearer, the other cheaper; besides the Wood is harder to press out, and this yields its juice more easily.

So then, from all the foregoing demonstrations I absolutely conclude, that there is not any place in the whole World, wherein great quantities of Salt-petre may not be made.

And if I should say, that there is not to be found in the whole world any places in which Nitre may be easier and plentifullier made than in the low Countries of *Germany*, as *Brabant*, *Holland*, *Zealand*, *Flanders*, *Friesland*, the *Groningen Fields*, the County of *Emdane*, and all those Countries which run as far as the *German* and *Baltick* Sea, in this their moorish kind of ground; verily I should not speak untruth, but if need were, I could witness it of a certainty.

But lest my Writings should remain too obscure and unknown to such as are unskilled, and that such may not overmuch torment their Brains by unnecessary Pleadings how this may be effected, I judge it altogether necessary openly to confess the Truth before every one, and say, That Nitre or Salt-petre, were but its true use known, is justly and worthily to be accounted of as the greatest Treasure of the whole world, as being a thing by the help of which, good Health, Honours, and Riches may be purchased; and this we shall confirm in the three following parts. If then that this be granted, then this also will be yielded too, that the Subject-matter out of which it is extracted, is not to be despised, but to be highly valued; and therefore ought Wood and Turf to have their due Honour given them, concerning which, I have by many Arguments affirmed, that the one of them is every where in the upper *Germany* in great plenty, and the other in the low Countries of *Germany*, (nor doth these at all come short of the others) and that both may and ought to yield Nitre. Besides, not only the bare Turf is hereto useful, but likewise the hitherto thrown-away ashes, which are every where cast out as unprofitable.

NB. They are not useful in washing, as wood-ashes, with which the Laundresses make Lyes, and being they are not, they are thrown away as good for nought. But yet there is in them a great quantity of a certain salt, which being inverted by Art, passeth into Nitre; therefore through meer ignorance is there cast away, together with those Turfy ashes, a vast quantity of unripe Salt-petre, from whence a mighty profit might redound to those Countries, but being improvidently thrown away, is meerly lost. But yet I would not have any imagine, that the Salt which is made of the Lee of Turf-ashes, is presently Salt-petre; no, for 'tis needful that the subtilty of Art be first thereto used, afore such a Salt be brought to that pass, as to burn like Salt-petre: But yet care is to be taken, that that Art become not common, for then so Noble a thing, and so profitable to our Countries, will be known by Enemies as well as Friends; which to prevent, it must be warily handled, and the principal work here requisite is this, *viz.* That it may not be published so imprudently, as to render the ungrateful and unworthy partakers of the same, as well as the thankful and worthy ones.

By these things here spoken may every one see and gather, that God is no respecter of Kingdoms and Principalities, and provides for some better than for other some; all Men are His Creatures and Heirs of all His

Goods

Goods, if so be they be but willing, and do not stubbornly oppose and slight the Divine Grace, and do not wantonly cast it away and neglect it: Concerning which we shall speak more in the following part, touching the Concentration of Minerals.

This we must yet farther add, *viz.* That common Salt-Nitre is in all Coasts, in all Tracts or Continents, and in all Countries; yea, even in all those places in which there's neither Wood, nor Stones, nor Leaves, nor Grass, nor Earth, nor any bottom of Earth: As for example; Near *Greenland*, where the Sea is said to have no bottom, where the Whales are caught, and which do greatly inrich the Merchants with their fat or oil: Did they but know, that the remaining Flesh and Bones were even yet of great use, and knew they but how to turn them into Salt-petre, they would preferr it far before their Fat, for the sake of which, so much labour and trouble is undertaken; for in the flesh of one Whale only (which as it is, is not at all profitable to any man) I dare say, that there may be found 20, 30, 40, 50, yea, sometimes 100 Centenaries, or hundreds weight of Salt-petre. And so likewise the Intrails of the dried Stock-fish that are caught in *Island* and *Norway*, should I affirm, that they would even almost excel the Fish it self in value, I should not be deceived. I find no difficulty that might hinder me from affirming this to be agreeable to the Truth.

Do not the Salt-petre-men preferr the Nitrous Earth that's found in old burying places (if they can have it) far beyond other Nitrous Earths? And this among others, that most excellent Examiner of Metals, *Lazarus Ercker*, in his Book of examining of Metals, affirms, and gives this Earth the chiefest place. Nor is it to be wondered at, that of late in *Poland*, towards *Muscovy*, where formerly great Battels have been, and many thousands of men slain, and by reason of the multitude of them, have (after the Battel) been thrown into deep Caverns of Mountains for the easier burying them) there hath been a great quantity of Salt-petre extracted out of the Earth. Were there not gain and profit to be gotten, those men that are imployed in the extracting and boiling it, would not lay out so much Money on unprofitable Ashes of Carcases.

But to pass this by, let any one make but this Experiment: Fill some Vessel with Bulls or Ox-blood, and put it in a warm place till it putrefie and be turned as it were into Earth; then extract a Lye out of this Earth, and boil it so long, till a little skin appear on the top, then lay it by in a cold place, to shoot into Crystals, or little Stones, and these will be true Nitre.

NB. There is another and more compendious way of extracting Salt-petre out of the blood of Animals, which belongs not to this place to treat of; let us but compute the account a little. If there are yearly kill'd in some great City some ten thousand Oxen, besides Calves, Hogs, Sheep, and Goats, and the blood be cast away as unprofitable, [*now an hundred weight of blood yields some* 5, 6, 7, *or* 8 *pound, or more, of Nitre.*] the question is, How many Hundreds of Salt petre is lost? That this may be the more clearly evidenced, *viz.* That there is much Salt-petre in all Beasts, Fishes, and Birds, take another Experiment: Let a Beast, Bird, or Fish be laid in some warm place, where no Rain comes, to putrefie, out of the Carcass there will come Worms; of these Worms or Maggots take about one pound, more or less, put them in a Glass with a narrow neck, stop the glass with Paper only, and set it at the Sun, but not too hot, and in a few daies the worms or maggots will be turned into water; then pour out this water into a Copper Vessel tinn'd over, clarify it with the whites of Eggs, as Vegetable juices are wont to be clarified; then evaporate the clarified Juice, by little and little, by decoction, till it be covered over with a skin; as we have taught you in the Vegetable Juices; then set it by in a cold Cellar, and there will shoot good and natural Nitre, but especially if that Liquor shall have stood a while afore in the air.

The self-same Experiment may any one make with other Vermin that arise from Flesh or Cheese, and he shall find that even living Creatures have Salt-petre in them: so then there is nothing to be found, wherein that Universal salt of the World is not seen to be; but in some the salt doth sooner put on a *Salt-petre* nature, and in others it is already made *Salt-petre* by Nature.

Let this serve as an example, *viz.* The Essential or Universal salt of Vegetables, Animals, & Minerals, is indeed in its own nature nitrous, but it does not conceive any flame afore it has attracted life and flame from the Air. Further, one salt attracts that Life sooner and willinglier than another does, according as it is by Nature framed. By how much the more volatile and urinous the salts are, so much the sooner do they change themselves into Nitre; and by how much the more biting and more corrosive, so much the more difficultly and slowly do they put on the nature of *Salt-petre*. But because Nitre is a salt that partakes of both natures, *viz.* of a Urinous and Corrosive Nature, and is compounded as it were of both a Urinous and a Corrosive Salt, therefore by the help thereof one skill'd in Nature may easily help the salts, and make of them whatsoever he pleaseth. Nor is there in the nature of things any salt, but may by the help of Art be turned into Nitre; but especially those salts which are sublimed by fire, and are elevated by the force thereof; as likewise those that are in the Urine and Excrements of all Animals; yea more, Animals, Vegetables, and Minerals themselves do easily assume the nature of Nitre: This now is the first degree of salts. Another degree of salts are those that are somewhat fixer, (as the Sons of Art call them) and are such as are left in the fire, from Vegetables, Animals, and Minerals: These do more hardly pass into the nature of Nitre; but the hardest of all, are those salts which are in the third degree, as common salt, Sea-salt, Mountain or Fossile salt, Alume and Vitriol; for by Art are even these brought to that state, as to pass into true Nitre, but harder than the former, for they need a longer time for transmutation, than the abovenamed flying, volatile, and urinous salts. And therefore I would not have any of you to opinionate, that when I say in my Writings, that this or that salt may be converted into *Salt-petre*, assoon as ever it is extracted out of the *Lixivium*, or by barely calcining with fire, that (I say) it should presently be true burning *Salt-petre*; no, there is a yet farther time thereto required, whereto it may attract its life and soul out of the Air, and become burning or inflamable.

Every common *Barber* and mean-pated fellow, knows that the most *Salt-petre* hitherto made, hath been boiled out of a Lee, drawn out of the Earth taken out of old stables, wherein Sheep and other beasts have stood. And why, I pray, out of the old standing places of Sheep, Oxen, and the like Cattel, and not likewise out of the new? It is on this account, because old Stables do not only in *long* Process of time imbibe more salt out of the Excrements and Urine, and consequently yield more Salt-petre; but also those very salts (that come from the Excrements of the beasts) and which is the main thing, have in long process of time received their soul or life from the air, which new salts have not as yet attained unto: For

let any one boil, and try his concluſions on the freſh Dung and Urine of Animals, as much as he liſt, they will never become Nitre, unleſs they draw their Life out of the Air. Let any one take ſome good Salt-petre, and mix it with Earth, and deſtil off the Spirit in a Retort, there will come over into the Receiver ſuch a ſharp and corroding water, as will diſſolve Metals, Stones, and all other even the hardeſt Mercurial Bodies, and yet the Salt-petre was not corroſive before, but it hath gotten that degree of corroſivity from the fire's operation. Contrariwiſe, let ſome good Salt Nitre be taken, and be calcined in a Crucible, with burning Coals or ſuch-like other matters as will burn or calcine it: By this operation it will be changed into a very fiery and fixt Salt, but not ſo corroſive, and thus it will diſſolve all Fat, Oils, Greaſes, and ſulphureous Bodies, which thing the former corroſive Spirit will not do; for ſuch bodies as are diſſolveable by this fixt and urinous Salt, the former acid Spirit leaves them untouch'd; and on the other hand, it will diſſolve thoſe bodies which cannot be diſſolved by the fixt Salt, and yet are they both extracted out of one and the ſame Subject, by the help of the fire. Hence may it eaſily be conjectured, that this is an Hermaphroditical Salt, and partakes of both natures, ſeeing it puts on both (or either) of them; for the Philoſophical Maxim witneſſeth, that every thing hath its Original out of that into which it can be changed and reſolved.

Now when I pour the acid Spirit that deſtilled over into the Receiver on that fixt Salt again, they are both of them diveſted of their nature and property; the Spirit loſeth his ſharpneſs and acidity, and the fixt ſalt puts off its fiery nature, and ſo they both become again an Hermaphroditical Salt, but yet not preſently, but 'tis neceſſary to allow them ſome time of ſtanding together in the Air, whereby they may receive that life and that burning nature which the Fire hath deprived them of. But yet notwithſtanding, this comes ſooner to paſs in this, than in other contrary ſubjects, becauſe theſe two Contraries have heretofore already been one Salt-petre; for ſuch as never have been Nitre, but are hereafter to be ſo, require a longer abode in the Air. Theſe inſtructions we give to thoſe that might haply think that Salts may be animated without the help of the Air.

And now, that I may perfectly demonſtrate that Salts do get their life out of the air, without any encreaſing in weight thereby, and not from elſewhere, I will give you this following example. Take 1 *l.* of Honey or Sugar, and let it be diſſolved in ten pounds of Water, and let this Water be ſet for ſome weeks in a warm air, the Honey or Sugar will be as a magnet to this Water, and will by attracting a life out of the air turn it into ſharp Vinegar, and that without any thing at all encreaſing the weight of the ſame. By this means Water, by the addition of Honey, Sugar, Malt, or any other Vegetable Juice, will, by the operation of the hidden and attracting eſſential Salt, paſs together with it into excellent Vinegar. But now ſome or other may imagine that the Honey, or the juice of the Fruit and Corn, have in them an hidden acidity, which by the help of the warm encompaſſing air, hath revealed it ſelf, and ſo did not attract its birth out of the air: But I will ſhew you the contrary, as follows: Take a pound of Honey, Sugar, or ſome other Vegetable Juice, and force it over in a Retort into a Receiver, and you will find that there will deſtil over 10 or 12 lots (or half ounces) of inſipid Water, and ſo many of acid water; the remainder is a dead aſhes, and have nothing in them; the Vinegar and Phlegm that aſcended, will not yield one pound of Liquor, and the Vinegar it ſelf, with its acidity, will ſcarce be ſo ſtrong in taſte as thoſe ten pounds of water that are turned into Vinegar by the air.

This now demonſtrates, that there was not in the Honey any more acidity than what was thence drawn out by the help of deſtillation, for the remaining aſhes have not any taſte at all. But put caſe that the acidity which is driven out of the Retort into the Receiver by the force of Fire, ſhould be as ſharp as *Aq. fortis*, (when as tho' it is ſcarce as ſowre as Vinegar) yet would it hardly make ten pounds of Water ſo acid as to be compared with the other which is made by the eſſential Salt and the Air; ſo that it is evident that the acidity (as being a life) is drawn by the Magnetick Virtue of the Honey out of the air.

But as touching this Eſſential Salt of Vegetables, its being a Magnet, to extract an acetous ſpirit out of the air, and communicate it to the dead water. You are here well to obſerve, that the univerſal ſpirit or ſoul of the World may be drawn out of the Air many and ſundry waies. In the aforementioned Example of Vinegar is a ſpirit extracted, which is fit for the converting of Vegetable Liquors into Vinegar. In Hermaphroditical ſalts, the Univerſal Nitrous ſpirit becomes burning, as in Wine, Ale, and Metheglin. All theſe are ſo made by the means of air, without which no Wine or Ale can ferment, and without fermentation it is impoſſible for a burning ſpirit to be generated; which ſaid ſpirit is eaſily afterwards turned into Vinegar, and this Vinegar into Nitre, and this Nitre again into a burning Spirit or Vinegar; for every Life is of one and the ſame original, and may by the benefit of Art be changed out of one nature or property into another.

So likewiſe the ſame is to be underſtood in the generation of Salt-petre, all Salts of Animals, Vegetables, and Minerals are dead, afore they get themſelves a life after a magnetical manner out of the Air, and be made into Salt-petre; for amongſt all ſalts, none deſerve to be called a *Live Salt*, but that one of *Salt-petre*, which by the Philoſophers is called the *Watchful Dragon*, which likewiſe at the beginning was dead, but hath got himſelf a Life out of the air. By all which it is moſt clearly manifeſt, that the life of all things ariſeth out of the air, and that thoſe Creatures which come not into the air want Life, and that ſuch things as already have life, are choak'd and die if the air be taken from them. Hence comes the death of all things, by a ſuppreſſing or taking away of air, (in which air the Life of all things conſiſts) what way ſoever it be done by, as the aforeſaid example of the Vinegar teacheth; for if Honey or Sugar were not made thin with Water, there would never have hapned that changing into Vinegar. So likewiſe *Grapes*, *Apples*, *Pears*, *Barley*, *Oats*, *Wheat*, were they not moiſtened with water, but remained dry, they never would get the nature and property of Vinegar, and that for this reaſon, becauſe the air could never infuſe its life into a dry and ſhut-up body.

This they well know who are imployed in making a quantity of Vinegar; and upon this account do they in Summer time ſet their Veſſels open to the Sun, and in the Winter, they keep them in warm ſtoves near the fire, and both afore and behind, and at the bottom do they make holes to give the Air entrance, that ſo they might the ſpeedilier promote the changing of the Wine, Ale and Metheglin into Vinegar.

They likewiſe know this too, that even ſtrong Vinegar

negar if it be a long time shut and kept from Air, corrupts and dies. The which thing, seeing it is to be as well understood of other Subjects, as of these here, *viz.* Salt-petre and Vinegar, we may affirm thus much, That by how much the more of warm Air comes to the Wine or Ale, so much the sooner will they pass into Vinegar. And by how much the more of warm Air the Salts draw, so much the speedier will they draw a Life thereout-of, and put on themselves the nature and property of Salt-petre. This is the reason why the Salt-petre boilers do sometimes turn or dig up the Earth from whence they have had Salt-petre, and moisten it with water, that so the Air may the more commodiously penetrate that Earth by its operation, and infuse Nitre thereinto. But yet this business goes slowly on, and may be compared with that where a man presseth out Grapes or Apples a little, and then exposeth those Reliques of the press'd Grapes or Apples to the Air, or else grinds Malt somewhat grosly and moistens it with water and so sets it by that it may be endued with the nature and virtues of Vinegar: It would indeed come to pass, but yet much slower than if Wine, Ale, or other Drinks were set by so, without the huskiness or bran: The same is to be observed in the making of Salt-petre. By how much the more, the Air toucheth the Salts, so much the speedier will it reduce them into living Nitre. This may be seen in old walls that are built in moist places, you see how the Lime sprouts out and is converted into Salt-petre. We see not the same thing done in the inside of the wall, where the Air can cannot penetrate into it. Hence know I of a truth, that it is not the husks of the Grapes, nor the husks or bran of the Corn grows sour, but it is the thin Juice or Liquor that is either pressed out of them, or extracted with water. And I likewise see that 'tis not the Ashes, nor Calx vive, nor the like calcined things that becomes Nitre, but only the Salt that is hidden in them. Therefore seeing that all calcined things being moistned with water and for a long time exposed to the warm Air do extract a Life and become Salt-petre, and that the Ashes and Calx are like a dead Earth and never yield Salt-petre, but remain a dead Earth. Likewise, forasmuch as such Earth doth not at all conferr ought to the generation and making of Salt-petre, but is rather every where an hindrance thereunto, whereby the Air cannot associate it self to the Salt; therefore do I separate the earth, body, shell, and useless garment, and keep the Salt, and I introvert it by the Air and turn it into Salt-nitre, but yet not without the addition of Water, in which the Salt is dissolved and rendred more fit for extracting a Life out of the Air; for otherwise should the Salt remain dry this transmutation would be a tedious while a bringing to the desired end.

If therefore the Salts that are prepared by the fire are dissolved in water, and the water be together with it kept by peculiar Instruments in perpetual motion, and some heat be also thereto adjoined, so that there be not the least Atoms of the Salts to be found which have not the unceasant penetration of the warm air, and which are not animated, (because the warm air and motion do in all places touch and vivify the Salts): Such an operation as this does more in four Weeks, than if the Salt lay in the heaped up Earth and open to the air (far longer) wherein it would not in a whole years time attain to so great a change. But this perpetual agitation and heating consisteth in a certain wooden Instrument which may of its own accord by an unceasing motion heat the Salt-water, so as that every Week a growing alteration may be evidently seen and perceived. It is not of any great charge, and one may get ready as many Vessels to be filled with Salt-water to make Salt-petre with (as he pleaseth) for one Man can manage an hundred of them or more and conserve them in continual heat and motion, so that a Man may keep such an Art secret as long as he pleaseth. And as concerning the ordering the salt by the help of the fire and getting it a magnetick and attractive faculty afore it be dissolved in water to be put into the Vessels; and also how the Vessels are to be prepared, this cannot be conveniently declared in writing, but it is expedient that as well the manual operations requisite for the endowing of salt with a magnetick faculty, as the Instruments necessary for the turning it into Salt-petre be also well lookt into, with all the appurtenances thereto belonging. Any one will easily comprehend them all, and be able to imitate them; yea far easier than any gross or great work, and it may be improved in any subject whatever. It is not any sordid kind of operation, but pure and clean, it needs not any making of Lixiviums, nor any decoction, nor any evaporation, but perfecteth it self without impediment or retarding the work, and coagulates the Salt into Nitre. Verily it is a most delicate and most profitable invention, from which many others may have a beginning and flow.

Thus have we declared and proved that the soul of the World vivifying dead salts, and turning them into Salt-petre, adds not unto them either weight or encrease, and yet nevertheless it is of such abundant efficacy and power as to reduce them all to Life, which Life is no other thing but the little Bird of *Hermes*, and easily admits of being esteemed for the most noble amongst all the Creatures GOD hath made, set aside but the soul of Man, and may by the help of Art be again extracted out of the Salt-petre. But that I may mention the thing more openly and more clearly; I say, that the salts must (by the help of Fire and Art) first get a magnetick and attractive power and faculty afore they can draw a Life out of the air. Now then, after that the universal Life of the World is caught and fettered as it were by the salts, and hath turned the dead salts into living nitre, yet that life lies hidden in that Salt-petre invisibly, and can but a little or scarce any thing at all shew out or dispay its virtues by reason of the Grois body of the salt.

NB. If so be that any one shall but know how to draw out this Life again out of the Nitre, and bring it into a body, and make it visible, he shall have a thing so admirable that he'll scarce find the like (as I believe) in all natural things. For there is such a sweet and red Liquor, as to sight, thence had, that one only small drop will tinge a thousand parts of water with a Golden colour: which (said Liquor) I have not as yet brought to a constant or fixed Medicine, but do make use of it in Medicine (as it is) and I find in it things wonderful. But this little Bird (as far as I know) cannot be again extracted out of the Nitre by any other subject than with a net artificially prepared of Sheeps-skins.

Such a worthy thing as this is, do I rank in the number of great secrets and mysteries, and I suppose it to be that work which the knowledge-desiring *Jason*, being holpen by *Medea* who was most skilful in the Chymical Art, took away from the Dragon, and called it the Golden Fleece: But I would not have any one perswade himself that I speak here of such a Tincture as is extracted out of fixt Nitre (and likewise the same is extractable out of Salt of Tartar) by Spi-

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rit of VVine. No, that is no true Tincture, but the Spirit of Wine is somewhat altered and tinged by the fixt salt. But that Liquor of mine is the true, occult, and inmost Tincture, Virtue, and Life of the Nitre, and is of a golden Nature, but plainly flying and volatile, one drop whereof doth so gild an whole Imperial, as if it were gilt over with Ducket Gold. This Tincture cannot be changed or altered by any contrary Menstruum, be it Corrosive or Urinous, no nor by *Aqua-fortis*, or Liquor of Salt of Tartar; the like of which is scarce to be found in all nature.

For if there be a most delicate colour drawn out of the Vegetables, as Cochenele, Saffron, and such like, by the help of the Spirit of Wine, and there be dropt therein but one only drop of *Aqua-fortis*, the colour will presently turn pale, and if you add more, it will vanish for altogether. Or else if a drop of the Liquor of Salt of Tartar should be put therein, it would presently change colour and become duskyish. But now, this true Tincture of Nitre, or Soul of the World suffers not any change from either of the contraries. And should one have even a metallick Tincture, or extract even from Gold it self, yet would it not stand in this tryal, but would be precipitated either by the acid or the fixt salt, and separate from the Menstruums. But ours doth constantly abide in every trial, and resists both the contraries.

I do therefore repeat what I have often said, that there is more lies hidden in Nitre than many thousands of Men can perswade themselves of. But because it is so vile and abject a thing, no body thinks that there lies hidden any thing of good therein. But do but read the chiefest of the Philosophers, and you shall therein find that they do enigmatically point at Nitre, and do call it the Dragon which is to be slain by its Brother or Sister afore it parts with its Treasure; But enough of this.

The things hitherto mentioned, have I produced for this end, that my Neighbour may be the better certified concerning them. All the Philosophers Books are full of this thing, amongst whom, *Hermes*, and *Basil Valentine* excel, who have written most clearly. *Paracelsus* saith openly, Alchimy hath found it in Nitre. The late Philosopher *Nuisment*, hath published a Treatise of the Salt and Spirit of the World, and is verily most worthy the reading, which (said Book) I commend to the Reader that studies these things. Therefore do I here again repeat what I have so oft reiterated, *viz.* That Salt-petre is the most admirable, the most excellent, and the most powerful Subject of the whole World, whose wonderful properties cannot be enough search'd into. But because it hath its rise from dung and putrid rotten things the greatest company of foolish ones do despise it, but the small company of Philosophers and Wise-men (who are those that know what admirable virtues it has) do most highly esteem it, and set thereon a great value. The well disposed Reader will clearly find more as to its virtue and efficacy, in the three following parts.

O thou the original of all good things, and Treasure of all Treasures, vouchsafe that we may well and rightly improve this earthly and fading Treasure, and may so search after, and use it unto the end, that we lose not the chiefest good, but may rather find and keep thee for ever.

An Admonition, adjoined as an Over-plus.

IN the first Chapter of this first part of the concentration of things, have I plenarily manifested, by what means, new Wines and Musts are (by the help of an Artificial condensation) to be brought into a narrow compass, that so they might be carried into far remote places wherein there are no Wines, and may there be sold to great profit. But yet I forgot to shew, by what means the savour which the winy Juices contracted in their concentration, is wholly to be taken away in the fermentation when they are again dissolved in water, that so the Wines made of those Juices may not have any untoward and unpleasant taste. 'Tis an Artifice without which no man can easily, quit himself in this Art of making Wine. But that I may certify every one hereabouts, the Medium (or Basis) necessary about the precipitation in this work is no other thing but common *Sulphur* excellently well purified, a little portion whereof (according to the nature and property or disposition of the Juices) is to be hereto added, which must boil up (or ferment) with the Wine, that so it may draw to it self all the filths, and all the strange odour, and savour or taste in the fermentation, and by precipitation cast them down to the bottom, which being done the Wines become sweet, clear, and get a good savour. Furthermore it is to be known by what means (seeing that there are many fæces and defilements that will separate themselves out of those kinds of Wines as well as out of others, and settle to the bottom) even they are to be put to some use, that so there may not be any loss, but that the gain may be by so much the greater. Divers ways are there of making profit from them; as for instance, The remaining Wines may by pressed out in bags, or else they may be turned into Vinegar, or a spirit may be thence destilled, and the remaining gross matter be boiled in water, and the Tartar therein dissolved, and prest out in bags, that it may so shoot into Tartar. But as touching this expression I have taken care to have a peculiar Book published at *Norimberg*, (viz. *The Treatise of the Lees of Wine.*) So that it is wholly needless to make any mention of the same, in this place. The Courteous Reader may use it to his occasions, as being such a Book, in which he will find the said pressing out the Wine and Tartar, and also the making of Vinegar, clearly described, with all the circumstances thereabouts, and without all question if he rightly understands me, and sets about the work, he will do himself a great deal of good.

NB. But if so be that any shall know the Art of turning the Tartar of those Fæces into Salt-petre, (and such a thing may be done and that in a very short time) he will get twice the profit, that is to be gotten by making Tartar of them; forasmuch as he need not put himself to the inconveniency of pressing them.

In the second Chapter of this first part where mention is made of the concentration of Corn, there it has been alleadged that the remaining husks or branny parts which remain after the extraction of the Juices, may be made to yield as much yea more Moneys than will pay the costs about the Corn. But it is well known, that those reliques that are left in your boiling up of Ale, are improved to fatten Beasts with. If now a *Medimnus* (a measure of about some 6 bushels) of Corn doth cost half, nay even a whole Imperial, those reliques (that are left of it in working) can scarce cost less than one eighth part of that Imperial. And now out of such a *Medimnus* or measure of such re-

liques,

liques, they would very hardly when turned in the Beasts, into nutriment, have made in them two pounds growth of flesh, the price of which (said two pounds) would not amount to the eighth part of the said Imperial: Whereas now, if those reliques were handled after the afore-mentioned way of reducing Wood into Juices, they would easily yield as much, or more Salt-petre than the price of the Corn was at the beginning. So that here's an enriching Treasure offers it self to the pious and diligent Housholder, whereby he may do good to those in need.

In the third Chapter of the first part, is mention made only of the Concentration of Wood, of the pressing the Juices out of the Wood, and of the making Nitre; But because there is not every where such great quantity of Wood, as to imploy it to the making of Salt-petre without omitting the more necessary use of it, yet notwithstanding the case may be so ordered as that a great quantity of Salt-nitre may be made of the Leaves of the Trees and the Grass that grows under the Trees, and there's no need to cut down the Trees, if a Man has no mind so to do. Besides too, in such places where there's but little Wood and much Corn, even the very stubble or straw (of the Corn) is fit enough to be made into Salt-petre. So that there is no place where there is not matter found for the making of Salt-petre.

And therefore I cannot forbear but must needs teach all pious Housholders (whether they have their Houses in Cities or in Villages) a certain easie Artifice, by the help of which they may gather a Treasure for their Children, without any labour and costs, and such a one as Thieves can never rob them of.

And now, seeing I have revealed in this small Book, for the benefit both of Rich and Poor, high and low, three Artifices or Workmanships by which, Wine, Corn, and Wood may be made more profitable; but yet have not brought any assisting help to such as want both Wine, Corn, and Wood, I have judged it worth the while (that so even they who have nothing, and yet nevertheless desire to provide for their Wives and Children in some honest way) to bestow on them a secret Art, whereby they may seek their advantage or profit. And I hope the thing will redound to the Honour of God, and to all our Healths.

Besides, I will shew away to such as have no inheritance left them from their Parents, nor have any thing come to them by Marriage, by what means they may without labour and trouble get a Treasure for their Children.

First of all, Let such a one take care to have some shade or hovel made, to join to that side of his dwelling that lies in the middle 'twixt the North and the East part of Heaven, or some other more convenient place, so as to admit the Sun and Air to it, but to keep off the Rain. Under this Pent-house or Hovel, let him dig a large Pit, and with the Earth he digs out let him make banks round the Pits-mouth that so it may keep the Rain off of every side. This done, let him each day in every year, or whensoever he can conveniently carry and throw into that Pit these following matters, so long till his necessity forceth him to dig all out again, and to see how much Treasure he hath gotten, even whilest he slept. Now these matters are, All sharp and bitter Herbs, growing in by places, amongst bushes, and in the way sides, and such as the Beasts feed not on, as *Esula*, *Cicuta* or Hemlock, Henbane, Fumitory, the thick stalks of Tabaco that are thrown away in those places where it is planted, the hard stalks of Colwort, which the Beasts eat not of, and likewise all those things they leave in their Troughs; likewise Firr tops or Apples if you have them at hand; also the Leaves that fall from the Trees in Autumn are to be gathered; also Pigeons-dung, and Hens-dung, Birds and Hens Feathers; all the Ashes which VVomen usually make their Lees with, and other Ashes that are not fit for that use, as also such out of which the Lixivium or Lee is already extracted; the soot of Chimneys, Hogs hairs, the horns of Oxen and Cows, and the bones which the Dogs eat not of. All these matters may he throw into his Pit, and that he may the sooner fill it, he may gather as much as ever he can from the bordering places, and throw it therein, that so in one or two years time he may with all those things fill up his Pit. Mean while he must pour into the Pit the piss gathered in his House, and that he may have enough he must also get as much as he can from his Neighbours, so as to keep the things thrown in the Pit in a continual moisture, whereby they may the sooner putrefy. In want of Urine, common Water may be taken; if Sea-water or other Salt-water can be had, it will be the better. Also the Brine of Fishes-pickle, and the salting or salt-water that Flesh is macerated (or pickled) in are of good use in this business; likewise the Blood of Oxen, Cows, Calves, Sheep, which you may easily have at the Butchers; all these things putrefying together do put on the nature and property of Salt-petre.

If now, all those matters in your full pit shall have well putrefied, then cease from pouring on any more moisture, and all the things are to be left so long till they are dried. And then if you need Money, let a Salt-petre maker be sought for, and bargain with him about the price of drawing out your Salt-petre by water, of making it, and selling it. This done, cast the remaining Earth again into the Pit, together with the remaining Lixivium that shot not into Nitre, and there leave it for a year or two, and moisten it sometimes with Urine, or if you have not this, with common Water. This Earth will again yield Salt-nitre. but not above half so much as at first.

NB. If you stand not in need of Money, let the matter lie, and as oft as it dries, so often moisten it again with the aforesaid moisture, that so the Nitre may more and more grow and increase. By this means shall such a one gather a secret Treasure, & shall not know almost how he came by it. If he needs it not himself, his Children will find it. Thieves & Souldiers will not steal it away. If one Pit be full then another may be made, that so nothing at all of those matters, which otherwise are most base, (but in this case most suitable) may be lost. Now if there were but only one in every Village that were appointed to exercise this Labour, there would be found out as it were in a small Country many thousand hundreds of Salt-petre, and so these matters still serving for the same use, there would never be any scarcity of Salt-petre. And now, Nitre being present, Gold and Silver are not far off. Let every one observe this, and esteem it. Men will sometime or other at last, become thrifty and wise, and will see what blindness they have been possessed with.

Give GOD the thanks, and be helpful to thy Neighbour. GOD hath bestowed on me, I bestow on thee, do thou likewise bestow somewhat upon thy Neighbour, and it will be well with us all.

THE SECOND PART OF The Prosperity of Germany.

Wherein is shewn,

By what means Minerals may be Concentrated by Nitre, and turned into Metalick, and better Bodies.

For the benefit of my Country, and of all such as affectionately and industriously follow after Metalick Affairs.

Friendly Reader,

I *Have taught in the first part of this Book, by what way the Vegetables, as Wine, and Ale, are to be concentrated, whereby they may yield more profit than hitherto they have done, and also, how Wood is to be reduced into Salt-petre. In this present Second part, shall be taught, how the Salt-petre is to be used, and how, by it Minerals may be Concentrated, and wrought into Metalick Bodies. And as to this Concentration, thus stands the case; that is to say, forasmuch as a good part of Minerals are of very little use, and lie neglected as things of no worth, and prove not profitable to any one, (whereas if there were Men that understood but the Art of it, there might redound a great benefit to the Lands where they are. It hath seemed to me worth while to declare it to my Country, nor doubt I but that there will arise some diligent ingenuities, who will lay the thing to heart, and take care thereabouts, and will even set their hands to the work it self, and thence get much profit; which to me would be very pleasing and acceptable. Therefore (in the Name of God) will I set about the manifestation of the Gifts of God (which lie every where unknown, and wholly disesteemed, and which yield no Man any fruit) and lay them open before the Eyes of the whole World, that so they may be better known hereafter, and be of more benefit to the Country. And I beseech the most Wealthy, and the most Ancient Housholder, our most merciful Father, to bestow a Blessing, and good success on this my endeavour, that it may tend to the Honour of his most Holy Name, and the health of all our Souls.* Amen.

Of the difference of Minerals, and what is understood by the Name of Minerals.

AS concerning the word *Mineral*, why all Fossile and Metalick Mines are so called afore they have been wrought upon, and brought by the fire into Malleable Metals, I judge it but of small moment to make any tedious Comment thereupon; besides, others have long ago throughly treated of that, and yet it makes but little to the thing it self. But my purpose is (at present) to teach, what means such little esteemed Minerals may be made useful, and profitable by; but afore I begin this work, I will recite, and shew the many sorts of Minerals that there be; then next that, I will shew how, by the benefit of fire, and the hands of the Artificer, they may be converted into better bodies, and become useful, and profitable for Mankind.

Under the Name of Minerals are comprehended, or reckoned these following, *viz. Antimony*, *Auripigment*, White, Yellow, and Red *Arsenick*, *Cobolt*, *Lapis Calaminaris*, *Zink*, *Bismute*, or the *Silvery Marchasite*, likewise the *Golden Marchasite*, *Pyrites*, or *Copperas* stones, *Vitriol* of various kinds; as also, its kindred, may be added to the number of Minerals. And albeit, that some do also referr Alume, Salt-petre, Sal-Armoniack, Sal-Gem, and others of that kind to the rank of Minerals, yet cannot I acknowledge them for such, or reckon them up amongst the number of the above mentioned, seeing there is nothing Metalline to be found in them: Such only therefore do I call Minerals, that have in them a Metalline nature, and which do admit of being joined with other Metals, and of being molten together with them in the fire, and out of which the known Malleable Metals, may be extracted. These are they which I intend to treat of, and will see, what good is thence-from extractable.

And first of all we'll speak of *Antimony*.

Antimony is the noblest Mineral of all, not only because it doth for the most part contain Gold in it, but upon this account too, because more eminent Medicines may be thencefrom prepared for the use of Mankind. In the Mine-pits it has its peculiar Veins; that which is found in *Transilvania*, hath some little bigger portion of Gold in it, and is accompted of as the best in all *Europe*, next that is the *Hungarian* ♁, which likewise doth sometimes contain no contemptible portion of Gold; next is the *Fechtenbergick*, which is found at a small Town call'd, in the *German* Tongue, *Gold-Gronack*; the *Polonian* sort, and that which is found in most places of *Germany*, contains but little Gold, or none at all; but there is some which has much Silver in it, and (for the most part) is neither wont to be used, nor desired, or sought for, save by the Letter Founders, and these use it to make their Matters flow. Also many do use it (*viz.* ♁) in Medicine, and do much good therewith, but it hath certain Enemies who are none of the wisest, and so is hated, and rejected. But yet there lies in it more hidden good, than all its Enemies are able to conceive of, witness my *Panacea*, which is mentioned in the second part of my *Pharmacopœia Spagyrica*.

And

And *Basil Valentine*, certainly an excellent Philosopher, writ the Triumphant Chariot in its Honour, which is an exquisite Book and profitable to read.

But as concerning the way of making a Regulus out of Antimony, and as to the uses it serves for, that I have described in the fourth part of my Furnaces. Moreover, as to the manner of depurating Gold thereby, and cleansing it from all Heterogeneous mixtures, and as to the graduating of silver, thereby, that it may become Golden, all this have I spoken of in the Explication of my *Miraculum Mundi*; and as to what other effects may profitably be done, therewith in Metalick Operations, shall be shown, partly in this Treatise, partly in the third and fourth ensuing parts. As concerning the way of separating it in quantity out of the Ore, *per descensum*, is to be seen in *George Agricola*'s Book, that he wrote of the Metalick Art, and in others; nor indeed belongs it to this place to speak thereof.

Of Arsenick.

Arsenick likewise is a good Fossile, or profitable Mineral, and is put to many Uses. It also hath its singular, or distinct Veins in the Earth, whence it is taken; it is forced out of the Ore by Ascension, and Descension, and is purified for use: It is found white, yellow, and red. Also some silvery Minerals or Ores do in their solution, or melting; yield much Arsenick, which the Melters of the Ores do catch in Chimneys or Funnels made for that purpose, and keep it for use; concerning which, you may read in *George Agricola*'s Writings. So likewise, *Cobolt* yields Arsenick, and so do some Golden Minerals, or Ore; that which is separated from a Minera of Gold, *per descensum*, is very red, and auriferous; and this, those that deal with Metals, have experience of; which, if they separate not from the Gold Ore afore they melt it, it carrys away a great part of the Gold, and hides it in its Belly in the melting, so that they would not have so much Gold as there is in the Ore. For indeed, such a kind of Arsenick, is an unripe Gold, as shall be hereafter proved: So then, there lies more hidden in that Contemptible, and Venomous Arsenick, than any one will easily perswade himself to believe. There are also Medicines prepared out of it, but such, as serve only to be externally applied, in inveterate, and virulent Evils, as the Cancer, and Fistula. It is also used in Colouring and Dying Cloaths, concerning which, you may peruse my other Writings.

Of Auripigment.

This Mineral is in a manner of the same Essence that Arsenick is of; but this does not come forth of Minera's, or Metalline Ores, but hath peculiar Veins of its own, in which it is generated; it is an unripe Mineral, and doth for the most part also contain Gold. It is exceedingly Poisonous and Volatile, and therefore it is but little used, save only by Painters. It can be fixed by Nitre, and it makes Copper white, and brittle, as Arsenick doth: And it suffers it self to be sublimed out of its yellowness, into Transparent Rubies, which are used for Ornaments sake.

Of Cobolt.

Amongst all the Minerals that are to be found *Cobolt* is the most poisonous; it's an unripe silver, and it ofttimes yields in melting good silver, yet one sort more than other; some also there is which hath not any Silver at all, and is used about the sky-colour'd Smalt, to help make it, with an addition of Fusile Sand, and Potters Ashes. But when they meet with that which has Silver in it, they separate it thence from by Fusion; besides, it may be so fixt by the help of Salt-petre as to yield permanent Silver, as shall anon be spoken of.

Of the Silvery Marchasite.

The silver Marchasite, or Wismuth, is a known Mineral; it's every where found to and again in the silver Mine-pits, as well as Cobolt is, but yet it is much more fixt than Cobolt; neither is it of so poisonous a Nature. It is gotten out of its Ore, or Minera, most easily by a small flame of wood fire, and is used by the Pewterers to make their Pewter hard, sounding, and fluxile. Likewise, out of its scoria or drossy parts, is the blue Smalt also prepared, which the Potters use to glaze their Pots, and the Glass-men to make sky-colour'd Glasses. It doth very frequently abound with much silver, and 'tis rare to find any that is wholly void of silver: And if it holds so much silver, as is of more value than the Marchasite can be sold for (as 'tis barely *Bismute*) they separate it, if not, they leave it in it. For if an hundred weight doth not contain 20 or 30 Lots, or half Ounces they do not separate it, because the Marchasite will yield so much. But now, the Silver may be gotten out of the Marchasite, by Salt-petre, so as that the remaining Marchasite shall lose nothing of its goodness nor be at all spoiled, as I have shewed in the Explication of my *Miraculum Mundi*.

Of the Golden Marchasite.

The name of *Marchasite* is proper to every unripe Metallick matter (and is) of as many sorts as there are Metals; hereupon the matter which has Gold in it, is called the Golden Marchasite; that which has Copper, the Coppery; that which has Iron, the Irony, and so that which abounds with Sulphur, is called the Sulphureous Marchasite. But now there is Sulphur in all the Marchasites, and sometimes Arsenick too, but (the Golden ones) have more of Gold than the other Marchasites have; Besides, out of all kinds of Marchasites proceeds (for the most part) a Vitriol, which shews the nature of that Metal, which the Marchasite contains; one while Copper, sometimes Iron; 'tis rare to find a Marchasite that hath no Metal at all in it; if it hath nothing of Gold, Silver, or Copper, yet has it Iron, and gives out of it self a Vitriol useful for Dyers, and which such as prepare *Aqua-fortis* cannot be without.

Of Zink.

Zink is a Volatile Mineral, or a half ripe Metal when it is drawn out of its Ore. It is much clearer and brighter than Tin, yet not so malleable and fluxile as Tin is, and it is usually put to Tin to make it brighter and harder. We have it not much growing in *Germany*, but great quantity of it is every year brought us by the Merchants out of the *East-Indies*. The way how to prepare it for Medicinal uses, have I described in the first part of the Philosophical Furnaces. It is a golden but an unripe Mineral, it gives Red Copper a Yellow Colour and turns it into Brass, as *Lapis Calaminaris* doth; and indeed that same Stone is nothing else but unmeltable *Zink*, and this *Zink* may properly be called a fusile Lapis Calaminaris; for as much as both of them partake of one nature. But with *Zink*, there is most an end conjoined Lead too, and then it is not fit to make Brass of, unless the Lead be first taken thereoutof; so it is at *Goslaria*, where together with the Minera or Ore of *Zink* is Lead also digg'd out mixt amongst it, and is called a Lead Ore, though there be contained in that Ore, four times more of Zink than there is of Lead, and yet they burn up the Zink for to have the Lead, which Lead hath some Silver in it. In the melting it flies away in fume, and it is a volatile and combustible Mineral, and sublimes it self up into the holes of the Furnace,

Furnace, whereupon the Melters or Founders are constrained to knock it off frequently, leaſt it ſhould too much leſſen the Furnace; this matter they knock off, they call Calmei (which is Lapis Calaminaris) and which turns red Copper into Braſs, with encreaſe (of its weight); and ſo verily by means of the not-knowing or being skill'd in this Ore, a great quantity is yearly burnt up and loſt. Sometimes the founders do gather ſomewhat of the Zink, which is moſt excellently excellent; but that Ore might be melted with far greater profit, if they did not ſo burn up the Zink, and force it into fume; but ſeeing men are hardly drawn back from an old cuſtom, it muſt be born with.

But yet (I ſay again) if that Ore were handled in a due manner, there would redound far greater profit thencefrom than now doth. Such a kind of Mineral as this is doth Weſtphalia alſo yield, which the founders there accompt for a Leaden Ore, becauſe it has ſome load mixed with it, but when it comes to be freed or molten it goes (all) away in fume, and therefore they ſay, it is alſo a Calmei or Calaminaris Ore, and ſo it lies unuſed.

Of Calmei *or* Lapis Calaminaris.

Calmei Ore is digged out in many places in *Germany*, but there is none of ſuch note as that which is found at *Aquiſgrane*, for that is wholly void of all kind of Leadyneſs, and much different from that of *Goſlaria*, or *Weſtphalia*; and therefore it is alſo very fit to make Braſs of, which is there made in plenty, and farther, this has Gold in it, though not ſo much as to quit the Coſts of ſeparating it. But there is no Mineral richer with Gold than this, and could it but be ripened (and I doubt not at all of the poſſibility of ſo doing) a good deal of Gold might be drawn out from thence.

As concerning what elſe may be performed with that Mineral, I have formerly told you in my Firſt and Second Part of Furnaces, nor is it needful to treat of the ſame thing more at large in this place.

Of Common Sulphur.

Sulphur or *Brimſtone* is the moſt known, moſt uſed, and moſt combuſtible Mineral of all. As touching its uſes in Medicine, and in Alchimy, about the ſeparation of Metals; may you find ſomething mentioned by my ſelf, in the writings I formerly publiſhed, and in the writings of others too.

But at preſent we will only mind you of this, *viz.* That it is the very Foundation and Root of all the Metals; for tis rare to find any mine wherein *Sulphur* does not ſhew it ſelf. Very many places in the World, is *Sulphur* both made and digged out of the Earth, in very great quantity, & that chiefly in *Iſland*, and in *Italy*, nigh to thoſe always burning Mountains, *Heckla* and *Veſuvius*; it is alſo drawn out of Marchaſites *per Deſcenſum* in many places of *Germany*, ſo that enough of it may every where he had for a little money.

Theſe are the chiefeſt Minerals that I ever knew of, and theſe are they which are commonly ſought after, and applied to uſe. But now, beſides theſe, there are ſo many various kinds of Foſſiles and Minerals to be met withal, that one cannot reckon them all up, or give them peculiar Names. One contains Sulphur, and Arſenick, another, Cobolt and Sulphur; another Antimony, and Arſenick, and of that kind are there very many more. But yet thoſe that we have reckoned up, are the moſt known, and moſt in uſe, and therefore ſhall at preſent be ſufficient for us to ſpeak of.

Having now taught what Minerals are, and which of them are moſt known & uſed; I will now teach, in the next place, by what means they may (by the help of Salt-petre, & of other Subjects) be fixed, concentrated, imbodied, or brought into Metals, ſo as to be rendred profitable for the uſe of Mankind, and which otherwiſe lie every where to and again neglected and, are wont to be of no eſteem.

And as to the Concentration of Minerals, thus ſtands the Caſe with them; they are either to be fixed & ſubdued, as 'twere by the help of Salt-petre, that ſo they may not ſo ſuddenly fly away in fume in the fire, and be burnt up, but may abide the fire and ſuffer themſelves to be molten; or they are to be reduced into bodies by the help of Metals, that ſo they may come in uſe, and that by augmenting the Metals, as Lapis Calaminaris does, or they are to be purifyed, ſeparated, and made better, as ſhall be mentioned of *Sulphur*, *Antimony*, and the others, that ſo thoſe kind of Minerals of which there lies to and again, at preſent, great quantities, wholly neglected, and profitable to no body, may hereafter be of uſe and benefit.

And firſt of all, as to the fixation of the Minerals, the way of proceeding is thus, *viz.* The Mineral is to be powdered, and to be mixt with equal weight of burning Salt-petre, and ſo to be fired, that the combuſtible and volatile part of the *Sulphur* may be forc'd away, and the Mineral may afterwards brook the fire the better, and be molten and forced downwards (*per deſcenſum*); which operation I have treated of in the explication of my *Miraculum Mundi*, and therefore think it needleſs to repeat the ſame thing again here. By this mean therefore may *Arſenick*, *Auripigment*, *Cobolt*, *Zink*, *Biſmute*, and other Volatile Minerals be in ſome ſort fixt by the inflaming and burning up with Salt-petre, ſo as afterwards to endure the fire, and to yield forth the good they have in them. There's alſo another way of imbodying Volatile Minerals, *viz.* by the benefit of Metals; if the Metals and Minerals are joined together in a due meaſure, and be likewiſe united together by the virtue of a Cementing fire; then doth the volatile Mineral penetrate it ſelf into the Metal, and becomes Metalline, and doth alſo encreaſe the Metal, as is evident in Calmei or Lapis Calaminaris, which being joined with red Copper and cemented, enters into it, augments and encreaſeth it, and turneth it into Braſs; whereas there cannot be any Metal educed out of the Calmei by the uſual way of melting. In like manner may all Arſenical minerals be (by cementation) introduced into Copper, & made corporeal; and theſe do not colour the Copper yellow as Calmei doth, but make it white, nor is the Copper rendred maleable thereby but britle, but yet 'tis not without profit; for if that white Copper be handled after a convenient manner of taming or over-maſtering it, then the Gold and Silver that was in the Arſenick, betakes its ſelf into Regulus's, which are to be depurated in a Teſt or Cupel, or elſe by the help of Salt-petre; but there cannot any metalline body be made out of Arſenick, Auripigment, or Cobolt, by bare melting. The way of proceeding with it is thus; The Copper is to be cut into ſmall bits, and to be moiſtned over with *Linſeed* Oil, and the Arſenick, Auripigment, Cobolt or any other Realgar is to be powdered and ſtrewed thereupon, and ſo a bed of Copper, and a bed of Arſenick to be put one a top of another in a melting Pot; then the Pot is to be well covered and fenced with Lute, and placed in a circulatory fire, and the fire is to be put nearer and nearer to it, until the Pot is through red hot, then let it cool, and you ſhall find that the Arſenick hath gotten ingreſs into the Copper, and makes it black and brittle. The Copper thus burnt, may be reduced into powder, and burnt with good Salt-petre, whereby the Volatile Gold and Silver which was contained in the Arſenick, is made corporeal, and abides as conſtant upon

upon the Test as other fixt Metals do; so that by this means permanent and good Gold and Silver may be gotten out of every sort of Arsenick, Auripigment, Cobolt, and the other volatile, venomous and base minerals.

NB. This kind of operation is very dangerous to those that are unskilful, and who being unversed in the Chymick Art, have not learned to take heed to themselves. And therefore it behoves every one to beware of doing ought rashly or heedlesly. He that knows not how to carry himself (or his business) warily, let him forbear to meddle at all with this labour or process: But as for one who is better versed, and pretty well experienc'd, he may set about this work safely and will gain by it: Because there is oftentimes found Arsenick and Auripigment that hath in it much hidden volatile Gold and Silver, and which cannot be retained in the common way of melting by Fire, but will totally fly away: But now if it be imprinted in the Copper by Cementation, and fixt in the same by Saltpetre, and then precipitated by means of Lead or Iron into Regulus's, it will render all that fixt which afore was unfixt and flying. But as concerning such a Cementation and Fixation to be done by Nitre, will be manifested by the following process.

NB. But you are carefully to observe, that one mineral must help another in the separation of their Gold and Silver (if you would undertake this Labour for profit): For so each will produce what it has in more abundance, and thou wilt have a greater reward for thy pains and costs. For example, I prove and try Auripigment or Arsenick, and find that it is auriferous, and I have a mind to perfect it and turn it unto my use; hereupon do I look for such Copper as is likewise auriferous, (and indeed there's plenty enough of such every where): Into this Copper do I introduce my auriferous Arsenick by Cementation, and that I may not need to cupellate (or blow off) the same upon a Test (for the very Labour of so doing will cost more than the gains will be of that separation) I do precipitate the Gold that is therein into a Regulus, which Regulus being purified, I obtain the Gold that was contained in that Arsenick and Copper, neither is there any need of cupellating all the Copper. But that the precipitation of the Regulus may be the more commodiously done, I proceed on this wise. I find out some Antimony of a good sort, and which is of a Golden nature; likewise such Iron as hath Gold in it, both which, *viz.* the Iron and the Antimony, may easily be gotten, and then I set on the separation which I thus institute.

First of all I implant the auriferous Arsenick into the auriferous Copper (if such may be had) then reduce I these into powder, and fire them with an equal admixt weight of burning Salt-petre; by this means the Arsenick is made a little more fixt, and suffers it self to be the better dealt withal in the fire; but if you are well skilled in this kind of labour you may spare your Salt-petre and may melt down your Copper (burnt with the Arsenick and powdered) with an equal weight of Antimony. And if of its own accord it lets fall a Regulus out of it self, then there needs no precipitation, the Regulus may be laid by, and that which remains may be likewise precipitated into a Regulus with common Iron; and this (last Regulus) is also of use, as shall hereafter follow: But if not (that no Regulus falls) then that Mass may again be put into a Crucible, be molten, and a little Iron filings be cast in to make it settle; the which must be stirr'd about with a red hot Iron rod, and when it's well molten, 'tis to be poured out into an Iron Cone; which being cool, the Regulus may be knockt off, in which Regulus will you have the Gold that was in the Arsenick, Copper, Antimony and Iron. This Regulus must be cupellated either by Salt-petre in a Crucible, or with Lead upon a Test; which done, you will have the Gold that lay hid, and shut up in the afore-mentioned Minerals.

But now, if one hath a mind to make that separation yet more compendious, and to have greater benefit thereby, he may add to that Copper burnt by the Arsenick, some Silver burnt with Brimstone, and so melt it with the Antimony, and by the means of *Mars* precipitate them into a Regulus; then the Silver will so much the better draw to it self the Gold out of the Arsenick and Antimony, and yield (in the separation) greater benefit.

NB. If so be a man be not skilful in this operation, let him forbear his Silver a little, and add some Silver to the Regulus by melting them, and then afterwards purifie the Regulus by Salt-petre; for so the Gold that is in the Regulus associates its self to the adjoined Silver, and inricheth it with no little increase, *viz.* according as the Minerals have had more or less Silver, in the making their separation.

And this is such a work as seems sufficiently able commodiously to sustain life; but it requires an experienced Artist, not a giddy headed fellow. Neither have I written this process for those who are not as yet well versed in Pyrotechny, but for such who are well skill'd and dexterous; and although this kind of operation needs no great store of Art, yet notwithstanding, every one will not rightly perfect it, and therefore do I warn such as are not well skill'd in Pyrotechny to desist from this labour, and betake themselves to some other, and set themselves about doing such things in which haply they are better skill'd, and not to lay the blame on me, when they are frustrated of their expectation, as if I had not dealt faithfully and sincerely in my writing, but let them rather impute it to their own prepostrous rashness and unskilfulness; and what loss soever they bring upon themselves, let them impute it only to their own (misconceptions).

To deal plainly with you, that labour is conjoyned with some difficulty; but yet if any one be diligent and well exercised in the Pyrotechnical Art, the operation will succeed in such an ones hands very pleasantly; nor will he want a worthy profit, especially if he takes such Minerals as are richest, and use them about this separation. But some perhaps will say, Whence shall I have those so good Minerals? Who demonstrates to me, which are auriferous, and which are not auriferous, which are good, and which are to be rejected, that so least being deluded in this, I should lose all my labour? I would have such a one know, that if he has not gotten so much skill and experience as to prove a Mineral, whether it be auriferous, or not, he is not at all fit to take upon him this Labour of separation, and he were far better advised, if he wholly abstained from setting about it. But yet that I may not omit ought which may seem to be desired from me, I will over and above add here in this place, what way Minerals may be proved by, whether they be auriferous or not, and 'tis on this wise to be done; all Realgars, as Arsenick, Auripigment, Cobolt, and others of that kind, are first of all to be implanted into Copper by cementation, then are they to be molten, or throughly purged and subdued with Lead (like as you do with a crude Mineral); after this, there

comes out a certain little ſilvery Pellet, and this you are to prove as you would for Gold. Now according to the moreneſs or leſſneſs of the ſame, ſo is the buſineſs to be ordered, and compute to be made, whether or no the ſaid Mineral is worth the pains of ſeparation as aforeſaid. Likewiſe the Copper it ſelf may be cupellated with Lead alone, and then the remaining ſilver Pellet be proved for the Gold, with Aqua-Fortis; but as for the Antimony, and Iron, they may be well melted jointly together in a Teſt under a Cover or Muffel, or in a clean Crucible in a Wind Furnace, with this obſervation, that there be uſed twice as much Antimony as Iron, and ſo a Regulus will ſettle, which is to be purged or tried with Lead in a Teſt, and kept flowing till all the fugacious parts are evaporated, which done, there is found a ſilver Pellet, which is to be proved with Aqua-fortis, how much Gold it has.

NB. This probation, or trial is to be accounted of as a certain and lawful trial, but ſuch though as you may eaſily err in the doing of, and ſo may have nothing, though it had in it a good part of Gold; for the Antimony will not eaſily ſuffer it ſelf to be vanquiſhed, or go off, but it will break the Teſt, or Cupel, and the little Pellet which is the probatory Globulus betakes it ſelf (by reaſon of the fierceneſs, or eating penetrativeneſs into the Teſt) ſo that the Proba or trial it ſelf, may moſt eaſily become fallacious, and yield no certain diſcovery. Which to remedy, the buſineſs is to be thus managed, after that your two parts of Antimony ſhall have been well melted in the Crucible, with your one part of Iron, there muſt be put thereinto a little dried Salt-petre powder, and the Pot, or Crucible muſt again be covered over, and care taken to make them melt well together; then are they to be poured out into an Iron Cone firſt ſmeared over with Wax, and when 'tis cold, the Regulus is to be knockt off from the Scoria, to which muſt be added twice or thrice the weight thereof of Lead, and the Regulus of the Antimony doth in the melting-pot ſeparate it ſelf by Salt-petre from the Lead, and the Lead is to be afterwards cupellated, and ſo that goes all off, and the true weight is had. But albeit, that this deſcription be clearly enough delivered, yet certain I am, that one in ten will not underſtand it aright, and therefore it is behoveful, more fully to inform, and clearly to ſhew the Reduction of that Regulus into ſcoria by Salt-petre. To make this trial or proof 'tis not needful to take a huge vaſt pot to fill with Iron, 'tis ſufficient to take of Iron 100 *l.* of the ſmaller probatory weight, and 200 *l.* of Antimony, both which are to be molten together, and to be precipitated with a little Salt-petre, for ſo the Regulus doth the better ſeparate it ſelf from the ſcoria's, the which is then to be waſht and purified by Lead and Salt-petre. This Regulus that comes from the Antimony and Iron, put with three times its weight of Lead in a clean Crucible, and make them well to flow in a wind Furnace, but cover your pot cloſe that no Coals fall in, and ſo hinder the work, then take off the cover and throw in a little powdered Salt-petre, and again cover the Crucible, and above all things have a care that there fall not in any Coals, and let them lie and operate a little upon each other, then the Salt-petre imbibes all the Antimony, Iron, and Lead, and thereby becomes hard. This being done, ſome more Salt-petre is to be again caſt in, and you muſt make them flow together, and ſo all the whole parcel of Antimony, Iron, and Lead, betake themſelves into the Salt-petre, and paſs into ſcoria, but part of the Lead remains whole or free, and is not ſcorified, and therein will the Gold be, which the Antimony and Iron had immixed in them, which if it be blown off on a probatory Cupel, or Teſt, under a Muffel, there will then remain the true weight.

NB. But it is expedient, that there be a juſt proportion obſerved in this kind of Work, that you take not overmuch Salt-petre to this ablution, or converting it into ſcoria, and ſo bring all the Lead into ſcoria, but the buſineſs is ſo to be managed, that there be left remaining one third part at leaſt, of thoſe three parts of Lead you took, which is not reduced into ſcoria with the Antimony; then may it be poured out into a Cone, and when 'tis cool, the Regulus is to be knockt off from the ſcoria, and Cupellated.

NB. He that is minded to waſh Metals after this manner by the help of Salt-petre, and to reduce them into ſcoria, muſt have an eſpecial care that not a Coal falls into the Crucible, for they will much hurt, and will again precipitate them, which the Salt-petre hath already imbibed, and ſo render the operation invalid. Beſides, it is worth the while to admoniſh, and tell you that all Arſenick, and Antimony is auriferous, but yet ſo, as that one ſort is richer than another, and that abundance of Copper and Iron hath likewiſe in it Gold, which no body finds out, nor can it be ſeparated by that old beaten way of Cupellating it with Lead. But ſome, or other might here ſay, Where ſhall I find Arſenick, Antimony, Copper, and Iron, which have Gold in them? Had they any thing of worth in them, others would doubtleſly have extracted it, and not have ſuffered it to come to my hands whole and ſound? To ſatisfie ſuch an one, I anſwer thus, tho' thoſe that work on the Metals, do for the moſt part know, that there is in Arſenick and Antimony, a Volatile Gold, yet know they not how to extract it thencefrom with profit, for the ſeparating way they take would coſt more than the Gold they ſhould have would yield, becauſe (according to their uſual way and cuſtom of working) all of it would vaniſh away with fume. And this is to be underſtood of Arſenick, Auripigment, Cobolt, and Antimony, all which may (by the way we have here mentioned) be tamed and introduced into Copper, and be made permanent and fixt.

But now, that there ſhould ſometimes be Gold implanted, naturally in Copper, and ſhould there alſo be left remaining untoucht, is ſo done on this account, becauſe there is not in it ſo much as to pay the Coſts of the ſeparating it by Lead (for verily the Cupellating it with Lead on a Teſt, requires great expences.) This is the reaſon why Gold lies immixed in the Copper oftentimes, and cannot be thence extracted with profit.

The ſame is to be underſtood of Iron, for a Vein of Iron doth oftentimes offer it ſelf, which is very much impregnated with the more precious Metals, and yet no body either knows, or obſerves it. For the Ore of Iron is for the moſt part wont to be forced out by unskilful Men who have no care at all of the Gold, but only of ſuch an Ore as contains a good portion of good and malleable Iron; and ſuppoſe they did certainly know, that there were in 100 *l.* of Iron, ſome Lots of Gold, by what means (I pray) would they extract it thencefrom? For Iron cannot be dealt withal by Cupellation on the Teſt, much leſs can it be ſeparated (as Copper is) by the means of Lead; ſo that there's no reaſon for any one to wonder

der that there are so few to be found, that promise themselves, or seek after much good out of Iron, seeing it is not so apt a Subject to be separated, and subdued as Copper is. But by the help of Arsenick, Auripigment, or Antimony, 'tis no difficult matter to tame, and bring it under, so as to make it yield forth what it has: And 'tis thus. This Iron, which is auriferous, may first be cemented with Arsenick, as we have afore taught of doing so with Copper, then is it to be precipitated into Regulus's by means of Antimony, which Reguli being imbued, or mixed with Lead, and reduced by Salt-petre into scoria, and cupellated, the Gold doth at last offer it self (which was hidden in the Minera's, or Ores, and so despised) and that with no contemptible profit. But now if any hath a mind to have the business yet more perfect, he may instead of Lead, add some Gold, and then reduce the Regulus into scoria's, by Salt-petre, and abstract it from the Gold; for so the Gold you put thereto doth the better hold that other Gold which it has attracted out of the Regulus, and there is made a much more plentiful encrease, than if the Regulus had been scorified upon Lead. Nor are the scoria to be thrown away, but they may be precipitated by throwing in live Coals, whereby the Salt-petre doth again let fall the Regulus which it hath swallowed up, and which Regulus you may separate from the dross when 'tis cold. This Regulus may be afterwards commodiously used in other Metalick Operations, that so it may yield anew out of it self the Gold; concerning which business there will a place fall in to speak of by and by. And besides, those drossy Offals (which for the greatest part are fixt Salt-petre) are also of good worth, which may be reserved for the subsequent Metallick Operation, which may be stiled a perpetual Metallick-working artifice; so that there is nothing at all wasted, but all things are of use. And this way of the separation of Metals is so very profitable, as that any one may get himself sufficient gain for to supply the necessities of Life. But if you have no fansie to meddle with Arsenick, or Auripigment and would willingly shun them by reason of their poisonous nature, they may even be omitted, and you may cement that auriferous Iron, with the Golden Marchasite, melt it with Antimony, and precipitate it into Regulus's. For even by this means too, the Gold that was in the Marchasite, is brought in use, and yields an increase to that Gold which is extracted out of the Iron and Antimony. But if so be there be no Golden Marchasite to be gotten, that separation may be ordered, even with Iron and Antimony, and if the Iron be but auriferous, the Labour will not be without profit.

This kind of separation or eduction of Gold out of the volatile Minerals, and baser Metals will be an egregious aid or benefit to such as have learned rightly to operate in the Fire, and whom (otherwise) a grievous want of things and small estate afflicts; for there is enough of the aforesaid Minerals, every where obvious, but they cannot be well handled, or wrought upon by reason of their unfixedness and immaturity, and therefore do they lie neglected and as it were wholly useless, and are not made beneficial to any. I know that some do well understand the way of fixing Cobolt, and Bismuth by Salt-petre, and do thence get an abundance of Silver; and likewise there are some that know how to tame and subdue Arsenical Realgars by the help of Salt-petre, so that they suffer themselves to be molten, and yield forth their hidden Gold and Silver. But he that shall so manage the business as to adjoin thereto the auriferous imperfect Metals, such an one will make a more successful work thereof; especially if he gets himself some auriferous Iron, the which he may get for a small matter: And besides, if he makes his Salt-petre himself, then all that whole operation of fixing or separating the volatile Minerals would be done with very little costs, and yield much gain.

NB. But now if any one would yet get more profit by this separatory operation, then he must contrive the doing it not in Crucibles or Pots, but in hearths (or furnaces) where a great heap of the volatile Mineral may by fixing Nitre melt together, and be precipitated into Regulus: then the Regulus may be separated from the Scoria, and be depurated by Nitre in other Furnaces, and be fitted for use; and so by this means may there be so much gain gotten, the like whereof, the great heaps of Ores which Men are necessitated to dig out of the bowels of the Earth with so much expence and charges, will scarce afford.

Likewise all Minerals may by the help of Salt-petre be fixed by the moist way, so as to yield permanent Gold and Silver; whereby (without doubt) full as much, if not more, is obtained, as is by the dry way. The way of operating is this. Dissolve a volatile Mineral, be it Cobolt, or Zink, Wismuth, Calmei, Arsenick, Auripigment, or any other the like mineral, in a strong *Aqua-fortis*; the solution being made, separate the *Aqua-fortis* again; then shall you have remaining a white Calx, which is fixed by the virtue of the *Aqua-fortis*: So that now it will admit of being molten with Lead, of being separated from the Scoria, and of being cupellated. But he that knows how to melt that Calx with Antimony and to precipitate it with auriferous Copper and Iron, gets more Gold than by that operation with Lead. But haply, every one can't perform that separation; for the excoction or melting, the reduction into Scoria, and Cupellating upon the Test, are operations more known and easier to be done.

Moreover, there are also some Minerals, which may be fixed with the moist fire, that is, with a most strong *Aq. fortis*, so as to yield their Gold and Silver in the *Scoria*, but especially Tin, Quick-silver, and Lead: If a vehemently-strong *Aq. fortis* be but once abstracted from Tin, it makes it so fixt, as that it will not fly away in the greatest Fire, but will melt into a white Glass. But now, if you would have it to yield forth its Gold, you must melt other Metals with it, into which the Gold may insinuate it self, and be made corporeal, such as are Silver and Lead. Lead, if it be dissolved in *Aq. fortis*, and precipitated by Urine, it gets such a hardness, that it will scarce melt in a Crucible; if you precipitate it with a Lixivium, it becomes glassy; if with Salt-water, it is rendered exceedingly volatile; for common Salt makes all Metals volatile, and on the other hand, Nitre fixeth them both by the moist and by the dry way, binds them, and constrains them to abide in the Fire; and this you are to know aforehand. Now, for the better confirmation of this thing, see how easily the common Mercury is made to abide the fire, if *Aq. fortis* shall have been several times drawn off therefrom, insomuch that it will suffer it self to be made wholly red-hot. But now, if the same be sublimed with Spirit of Salt, it becomes more and more volatile, so amongst all Salts there's not one that fixeth Minerals, save this most noble Nitre, and this hath a natural aptness to do it both by the moist and dry way, as hath been even now demonstrated.

And verily, this way of fixing the imperfect Metals (which

(which is done by the help of Nitre, by either the moiſt or dry way) is to be preferred far before that which is done only with a Fire of Wood; not barely on this account, becauſe it is ſooner and ſpeedilier performed, but for this reaſon too, becauſe it fixeth better and more durably: For if any one ſhall endeavour to make *Arſenick*, *Cobolt*, or other volatile Minerals, permanent or fixt, by the bare force of common fire, How much time, I pray, muſt he allow it? Haply it will require ſome months for this kind of Work, if not a whole year, yet at leaſt half a year 'twill need; whereas by the means of Nitre it may be done in one or two daies: For if a volatile Mineral be mixed with Nitre, do fulminate, and be edulcorated, and that fulmination be repeated 3 or 4 times, it will afterwards endure a ſufficiently-vehement melting Fire. Or if a Mineral be only diſſolved in *Aq. fort.* and that *Aq. fort.* again drawn off therefrom, it will even by this means be rendered fixt and conſtant in the Fire; ſo great is the force and virtue that lies hid in Salt-petre: And this the ancient Philoſophers well knew, and therefore ſaid that the moſt vehement Fire of all was to be uſed to the fixation of volatile Minerals; and this Fire is hid only in Nitre, and is no where elſe to be found; for the Central Fire hath too ſoon withdrawn it ſelf from the volatile Minerals and baſer Metals, and left them unripe, and they can be advanced to a maturity, both by our common Wood-fire, and by the fire of Salt-petre, and be fixed. And now I ſuppoſe that I have more than ſufficiently proved, by what I have ſaid, That Salt-petre fixeth Minerals and Metals, both by the dry and moiſt way; nor can any one reaſonably deny the ſame. Moreover, I judge it not fit to paſs this too over in ſilence, *viz.* That Salt-petre doth likewiſe make volatile, not only the unripe Minerals, but alſo the fixt Metals themſelves; ſo as that they ſuffer themſelves to be ſublimed and deſtilled wholly (like common Sulphur or Mercury) ſave the fæces, which are ſomewhat blackiſh and ſtay behind. Any underſtanding man may eaſily conſider here what benefit is to be hoped for from ſuch a Deſtillation of Metals; for ſeeing that all things are by deſtillation brought to the higheſt purity (as is clearly evident) it may well be concluded, that when in impure metals the pure parts are ſeparated from the impure, ſomething of excellency muſt therefrom proceed. I will ſay no more of this matter at preſent, for I have already clearly enough demonſtrated and plainly enough delivered this kind of deſtillation or purification of metals, in the third part of my *Spagyr. Pharmacop.* and have there ſhewn, that every imperfect metal, if it ſhall be deſtilled, yields volatile Gold, and that that volatile Gold may be made corporeal, without almoſt any Coſt in a particular way, (and haply alſo in a univerſal, which I confeſs I have not as yet proved) thither therefore referr I the ſtudious Reader of Hermetick and truly Philoſophical *Arcana* and Secrets.

But that the difference of thoſe waies of fixing or concentrating the volatile Minerals, and likewiſe the imperfect Metals, may rightly be perceived and laid open, and that it may appear how much more compendious and eaſie that way which is done by Nitre is than that which is done with common fire; it will be a good help to ſet down here ſome proceſs for an example, by which it will be manifeſt how laborious this way of doing it barely with Wood is, and contrarily how eaſie that way of doing it by the moiſt Fire of Nitre is.

It is impoſſible to fix *Arſenick*, *Auripigment*, *Cobolt*, and ſuch-like as theſe are without the help of Salt-petre, unleſs they are firſt introduced into other metallick bodies, and are together with them, burnt with a Fire of Coals, and reduced into Aſhes, and turned into Scoria, and wholly deſtroyed, and then at laſt reduced again into a metalline form, by the force of the intenſe fire of a Blaſt or Bellows: All which, that they may be dexterouſly performed, you muſt proceed on this manner, as followeth.

Firſt of all, the *Cobolt*, *Arſenick*, or any Realgar like theſe, that is auriferous, is to be introduced into Copper or Iron by cementation, in the way that we have aforementioned; then the Copper or Iron thus cemented with the Realgars, is to be reduced into fine powder, and to be commixed with Antimony, Calmei, or Calaminaris, the Marchaſite, and ſuch order is to be taken, (if for Gains ſake you would do a greater heap of matter) to have them ſlowly and by little and little made red-hot in Furnaces or Ovens, ſuch as in which the flame may have room to play, and as 'twere brandiſh it ſelf at top of the matters, and ſtir them, and ſo let them be calcined and burnt into aſhes, until they emit no more fume, and this will be in ſome few daies; then are they to be reduced in a convenient Furnace, and reſtored to their metalline form; then again muſt they be put into the former Oven, and there be calcined and burnt into aſhes, ſtill ſtirring them to and fro, and the aſhes are to be reduced, by the vehement Blaſt of Bellows, and this aſhifying and reduction is to be ſo long repeated, till there be a Regulus found in the reduction, and all the reſidue turns into unprofitable Scoria. This Regulus then is to be reduced on a Teſt into Scoria, and the Regulus being cupellated, the Gold and Silver which the volatile Minerals contained in them, doth ſhew it ſelf.

NB. Altho' this ſeparation is attended on with indifferent labour, yet notwithſtanding (if there be a great quantity of matter dealt in) it is alſo gainful, eſpecially where Minerals and Coals are to be had for a ſmall price, and alſo the other imperfect metals (as Lead, Copper, and the like) that concurr in this kind of Operation; by which it alſo comes to paſs, that there is a greater quantity of Gold and Silver extracted. For example, I burn Copper or Iron with Arſenick, Cobolt, and other poiſonous volatile Realgars, or with bare Calmei only, which alſo avails to conſtringe or bind faſt; with theſe I mix Antimony, Biſmuth, Zink, and Lead, and melt them together: Hence ariſeth a brittle maſs, which is to be reduced into aſhes, either in Ovens, as is already aforeſhewed, with the flame of Wood, which darts it ſelf at top of that mixt matter, and by heating ripens it, or by live-Coals in a peculiar Furnace, and that on this wiſe: Let there be built a great or ſmall Furnace, (of good Bricks or Tiles that will endure the Fire) according to the quantity of your matter which you take to prepare, let it be at leaſt a foot over in the inſide: in the forepart let it be open a foots heighth from the Pavement or Ground, to this end, that the Grate may be put in and taken out, as need is. Then ſome 2 or 3 foot higher than the Grate, let a door be made, whereby you may throw in the Coals, and above or at top of the Furnace are to be made Chimneys, fitted to receive and condenſe the fume of the metal, that it may not fly into the air, but being there cool'd, may be taken out. All this being done, fill the Furnace with Coals, and when they are well kindled, caſt in a portion of your metalline mixture, which will quickly melt, and being melted, will run through the fiery Coals, and ſtill keep fuming, and elevate it ſelf up into the appointed Chimneys; that which melts down through

through the Coals and Grates, and is in the form of metal under the Furnace, (which bottom must be made somewhat shelving, that the metal which falls down may run into a hole or pit, is to be taken up with an Iron Spoon, and again thrown in upon the Coals, and this is to be so often repeated, and so long, till all your whole mixture be burnt into ashes, or carried up in fume, and so shall be ashified and sublimed in the appointed Tunnels or Chimneys, which Flores or metalline Fumes you must take and reduce them in a reducing Furnace, so part of them will pass into a fusile Metal, but brittle. This Metal now must be again ashify'd in that roasting or burning Furnace, and be reduced by blast of Bellows; and this ashifying and reduction is to be so often repeated, till all be seen turned into Dross or Glass; which Dross or Scorias are then to be reduced with the most vehement blast of Bellows, and so they will produce a Regulus which is to be cupellated with Lead, as is abovesaid.

NB. But if so be that of the last-made Scoria a Regulus cannot be made by the blast of the Bellows, and that the Scoria remain Scoria, 'tis a sign that you have taken too much Tin, or that your Fire hath been too intense; and therefore you must take such Scoria, and beat them to powder, and mix them with a little of either the fluid Ore of Lead, or Spume thereof, and make them flow in a reducing Furnace, then the Lead draws the Gold and Silver out of the Scoria, which may afterwards be cupellated. But as concerning the manner of making the roasting or ashifying Furnace, as likewise the fusing or reducing Furnace, I cannot indeed at present here decipher it, but I will do it in the Third Part following, where more such-like concentrations of Metals shall be mentioned and treated of. And farther, the well-minded Reader must also know, that this kind of Concentration is not at all written for those that are as yet wholly ignorant of the Art of melting metals, but for such only as have already sweated at the Fire, and have been often and much versed in such Separations or Liquefactions.

I question not, but there will be many that will despise this my way of operating, and count it an impossible thing, such are to be left to please themselves with their own fancies. But withal, some will be found, to whom the nature of metals is known, and these will give credit to what I say, and will abundantly profit themselves, especially in those places where Minerals, Coals, and other things requisite are to be had for a small price. The greatest Expence in this way of Concentration is the Coals, which too cannot be any thing much in those places where there are such vast Woods. Every one may have his liberty to try it or let it alone.

NB. But I do openly affirm, that if so be any one shall know how rightly to handle and manage this Work, it may be compared with the perpetual or alwaies-lasting mines; and where minerals may be had, it will be most gainful; but I will not perswade any to attempt it in those Coasts where all things are dear. Nor do I think it amiss to dissuade them that have no experience in these kind of Operations, lest upon the ill management of the Operation, the effect should not succeed so luckily as they hoped for, and that then they should lay the blame upon me. That which I have at present written, is agreeable to the Truth, and may be successfully and gainfully performed by an experienced Artist or Laborator: And therefore as I have afore warned, so do I again advise the unexpert to abstain from this Work, unless he means to lose his Labour and Expences.

Such things as I have here omitted for brevities sake to speak of the *Concentration of Metals*, the Third and Fourth Part shall abundantly declare; but whoever he be that shall know how to bring to pass such a Concentration, either by the means of Salt-petre, by the dry way of a flame, or the moist way, by the help of *Aq. fort.* shall have a better effect than he that useth the Fire of Wood; but on the other hand, this Fire by Wood is of less Cost than the administration of the Work of Salt-petre is. Alas! What a deal of costs and labours have I bestowed in my life, in searching out and trying those kind of businesses, and having now brought it to this pass, as to be able to yield me the Reward of my Pains, I am not able to manage so vehement a fire, and to order the matters which require so great an heat? Therefore do I now with a willing mind make an offer of these my Experiments, to those who are of a vigorous age, and have Bodies capable of undergoing the toiling in the Fire. But that I may return to the things afore spoken of, and that that ashifying and reduction may not seem to the unexperienc'd altogether impossible and incredible, I will for their sakes bring undeniable Reasons or Arguments, whereby it shall be sufficiently enough evidenced, that such a cineration or turning into Scoria, hath its foundation in Nature, and that after this manner: Whosoever he be that hath seen or experienced somewhat in metals, knows, that the separation of the more excellent metals from the more vile, is to be done by the benefit of the Fire: for if so be that Gold, Silver, Copper, Iron, Lead, Tin, should be melted together into one mass, and you would separate them by the Fire the one from the other; this cannot be done any other way, but by adding to that mixture some other adventitious and destructive thing whereby the baser metals may be dissipated and deprived of their metallick form, of which sort is common Sulphur and such-like; for this works first on the imperfect metals, destroys them, or brings them into scoria and dross, which when they are so, and no more metals, they have no communion with metals, nor desire or love to be commixt with them afterwards: and by how much the more sulphureity there is in Metals, so much the easier doth common *Sulphur* destroy them and turn them into Scoria: But, by how much the nobler the metals shall be, so much the less detriment doth *Sulphur* bring upon them, and the less able is it to disturb (or alter) them. But besides, *Sulphur* does not only do this, but even the Fire, and Salt-petre both in the moist and in the dry way. It is done with *Sulphur*, if the metallick mixture be granulated and burnt therewithal, or that it be despoiled of the metalline Nature, then must it be molten and by precipitation be driven or be separated into divers Regulus's. For the *Sulphur* converts the *Mass* into Scoria, which when they are molten, that which in them is the most noble doth always separate it self from the Scoria, and settle to the bottom; then next the most noble part comes other which is excellent, but yet short of the former, and so consequently it descends from one degree to another, as from Gold to Silver, from Silver to Lead, from this to Copper, from Copper to Iron, *&c.* as hath been by my formerly described separatory Art sufficiently enough shewn. But Nitre performs the separations it makes in a different manner: For after that the metallick *Mass* is molten in a Crucible, and that this (*viz.* Nitre) hath been thereinto put, it doth in the first place set upon the sulphureous part, and turns that into Scoria, then the baser Metal, and thus it does on, so long till it hath attracted all the imperfect Metals to it self, and reduced them into Scoria: and so the perfect Metals remain alone, pure;

which order or governance of Operation, is alſo to an again, extant in my Writings.

Again, the bare fire is wont to keep another different way of deſtroying and ſcorifying Metals, than Sulphur and Nitre do.

For if a Metalline mixture be put in the fire, the more imperfect part thereof is conſumed in the firſt place, and driven into aſhes, the more excellent part gathers up it ſelf into a globular form; and as long as it finds any conſumablething therein, ſo longdoes it work and act thereupon, nor leaves it off afore it hath reduced all into aſhes. But that part which is of a conſtant and durable nature, remains unhurt by the fire; but yet if the combuſtible part be too much bigger in bulk than the abideing part, it does not only carry away with it the ſilver, but ſometimes alſo a good part of the Gold, and brings it into aſhes. And now, if thoſe aſhes ſhall be molten with a ſtrong fire, then the aſhes which ariſe out of the imperfect Metals, are turned into Glaſs, or ſcoria, but the aſhes of the perfect Metals do reduce, and reſtore themſelves into a malleable Body, whether it be Silver or Gold, according as it had this or that Metalline mixture in it; and if you proceed yet farther, with melting the aforeſaid ſcoria in the fire, there will a new Regulus fall out, which contains in it that Metal, which is the nobleſt next Gold and Silver, *viz.* Lead, and Copper; the Tin, and Iron do for the moſt part abide in the ſcoria: Even as it is in Cupellation, or the ſeparation of the Metals by the Cupel, the ſeparation is there alſo done, by the bare fire only, and when the fire acts upon the mixture, it reduceth the Lead into ſcoria, or ſpume, or Litharge, and while this is reduced thus, it ſpares not the Tin, Iron, or Copper, foraſmuch as they are likewiſe combuſtible, and of affinity thereto, but turns theſe together alſo into ſcoria, which ſaid ſcoria do then creep, or ſink into that penetrable, and porous Cineritious Veſſel, or Teſt, as long as any of it remains: But the Gold and Silver which know not how to be thus burnt up into ſcoria or aſhes, like the other imperfect Metals are left depured and cleanſed upon the Cupel: The like alſo, is to be judged of the aforeſaid incineration of Volatile Minerals, or imperfect Metals; that is to ſay, when they undergo the force of the fire, they cannot but go into ſcoria and aſhes, and if they have in them ſomewhat that is eſpecially good, and durable, yet the greater part being combuſtible, has the prevalency; ſo that the more excellent part which is in it, is converted together into aſhes and ſcoria. But yet it may be afterwards reduced, for by the vehement blaſt of Bellows, it ſeparates it ſelf from the more baſe part, and again aſſumes a body Metalline, whether it be Gold or Silver.

By this Diſcourſe any one that is not wholly void of all Metallick knowledge may ſee, that the Metallick Incineration and Reduction, which we have afore delivered, is built upon a firm foundation: But he that cannot underſtand or apprehend theſe things, is uncapable of being holpen by any art. But the following third and fourth parts will yield a more clear light, or inſtruction. Furthermore you are to obſerve, that there are likewiſe other ways whereby Metals are reduced into ſcoria, and the better and more excellent part is afterwards extracted out of the ſcoria, *viz.* by the help of Terreſtrial things which are together, ſulphureous, of which ſort is all Sand, Flint, and the like. If ought of this kind be permixt and molten with the metalline Calxes, it retains with it the viler part, and lets go the more excellent; as for inſtance, there's the Glaſs of Lead: For if the aſhes of Lead be molten with Sand, or Flints, all the Lead together with the Flints is converted into Glaſs, or ſcoria, but the Silver or Gold which was in the Lead ſeparates it ſelf like a Regulus, and deſcends to the bottom.

Some kinds of Salts alſo are able to make thoſe ſcoria's, *viz.* thoſe Salts which are extracted out of burnt aſhes, and are commonly called Alkalies, ſuch as are the burnt fæces of Wine, the Tartar of Wine, Potters-aſhes made of the aſhes of Wood, and other ſuch like; theſe alſo love to diſſolve the ſulphureous parts of metals, and do leave the Gold and Silver that is therein whole and ſound, and ſo make a ſeparation of the good from the evil, and give them a notable ſplendour: Concerning which waſhing, we will treat more fully in the following third part.

Beſides too, even common Salt deſtroyeth and reduceth the imperfect metals into ſcoria, but not after ſuch a manner as Alkalies do by waſhing, but by diſſolving and extracting. For if a metallick Calx, or Ore, be powdered and mixt with common Salt, and molten together, the Salt doth more readily ſeize upon the metal, than on the reſt of the droſſineſs, diſſolves it, and turns it into as it were ſcoria. But to illuſtrate this thing by an Example, If I would ſeparate a mineral which hath in it, Iron, Copper, Gold, and Silver, and ſhould melt it thus mixt with the Salt, then the Salt would the firſt time lay hold on the Iron only, and leave the other metals; but if ſo be there were not ſo much Iron, as for the Salt to ſatisfy its devouring ſelf, it would diſſolve the Copper too, the Silver and Gold remaining untoucht; for Salt is a common Enemy to Silver, but a Friend to the Iron and Copper, which it willingly diſſolves in the melting, and attracts to it ſelf, whether it be each apart by themſelves, or both jointly together, which if you are minded again to ſeparate each from the other, you muſt powder that molten Maſs, and pour water thereupon, and boil it; ſo the Iron and Copper enters into the water, together with the Salt, whereinto if you afterwards put ſome Iron Rods, the Copper precipitates it ſelf, and the Iron abides in the ſalt water, and is made very fit to uſe in dying like Vitriol; but if it will not be coagulated like Vitriol, then the Copper (which hath precipitated it ſelf about the Iron) is to be waſht and molten, out of which comes purer Copper. But yet ſuch a Copper may be converted to better uſe than to be molten, of which more ſhall be ſpoken in the third part.

By this means, may one ſeparate and bring into uſe thoſe Coppery Minerals, which have much Iron in them, and by which, the Copper is otherwiſe rendered unmalleable and unprofitable: and this is ſuch an Evil, as the Metal-workers have hitherto little known what remedy to apply; whereas in the mean while there lie in many places no contemptible Mines of Copper, neglected and unmedled withal, becauſe they have Iron commixt with them. Some there have been, who have endeavoured to extract the Iron by the help of a Load-ſtone, but this way is too troubleſom, and ſo is not profitable; but it may be aptly and conveniently done after this manner, did they but know how rightly to uſe here that aforeſaid ſalt water, and the precipitated Copper: For the ſalt exalteth the Iron, and the Iron doth again exalt the ſalt, and animate it, ſo as that it may afterwards with a little labour and coſts be, all of it, and without any loſs, converted into good Salt-petre. But ſome or other may ſay, what profit would there redound unto me, if I

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should season one or two, or more Copper minerals with salt, whereby the Copper may be thence drawn out? I would have such an one to know, that in that Operation, some hundreds, or thousand pounds may be done together, and the business may be ordered upon fire in distinct Furnaces, that so a great profit may be gotten; and not only thus, but the same may likewise be done without any Furnace or Oven, with many hundred, or thousand pounds in one Operation, at the open Air in the Field, or in a Wood, where that Ore and salt are to be found; so that the salt may serve as a covering to the mineral, and the mineral as a covering to the salt, and the Wood may serve both for the Furnace and fire.

This now in my judgment is an artificial extraction of Copper out of the Mines, (especially when 'tis such an Ore, which (otherwise) is not of any profit by reason of the immixt Iron, or else consists of such a lean Vein of Copper, as will not suffice to quit the costs of getting it out, but yet it may by this means be separated, with no contemptible profit. For there are every where almost such poor Copper Ore as this which lie and are not dreamt of: For indeed it cannot be expected, that, (if when a Copper Mine (or Ore) doth contain in it some small matter of Copper, it being so overwhelmed as 'twere with the muchness of heterogeneal medlies or mixtures, that it cannot precipitate it self into Regulus's but passeth into Scoria) it should answer the costs that are to be spent on the forcing it out; and therefore such Minera's must of necessity remain without use. And how many such kind of Ores have I found in *Germany*, which a man may have by heaps, but no body regards them, for that (as we have already said) they are too barren or poor: Whereas notwithstanding they may be most easily perfected by the help of Salt, so as to be made very gainful, & the costs exceedingly well repaid that shall be laid out upon them, especially in those places where there is such an abundance of Salt, that the Inhabitants know not what to do with the plenty they have of it. Many such places there are in *Germany*, as *Tirole*, *Saltzburg*, *Bavaria*, and the Dioceſs that we call *Bergtes-gaden*: in which places all the whole mountains do not only abound with Salts, but have no small portion of Copper too: Nor is it so in those places only, but likewise every where; Salt is common and of a small price throughout all *Germany*.

And as we have already shown you, that Iron and Copper may be commodiously extracted out of the Ores by melting it with common Salt, and may be again separated from each other by precipitation: So likewise may the same be done in a moist way by boiling; and is thus, if the Ore be ground and a long while boiled with very Salt-water, the Copper will be dissolved and passeth into the Salt-water, out of which it is to be precipitated, and so fitted for use. But now, if the Salt be distilled into a Spirit, then is it apt not only to extract Copper, but also Gold out of the Ore, and will be of exceeding much profit: But this operation hath already been long ago described by me, in the First Part of the Mineral Work.

NB. But it will be yet more profitable and gainful to prepare that water out of the Salts and especially out of Nitre, which water is but of small price, and yet notwithstanding it is of that Power and Virtue, as to dissolve or extract all the Metals out of the Ores: and as well the Silver as the Gold and Copper in the solution, may be again precipitated singularly or each *Per se* one after another; and this kind of water may you likewise use about all Fossiles or Ores with a most wonderful abbreviation.

But now, if you use common *Aqua-fortis*, it extracts only the Silver and Copper, and leaves the Gold: and if you take common *Aqua-regia*, it attracts only the Gold and Copper, and leaves the Silver; so that neither of these hath (as we use to say) all the points in it, especially seeing such a kind of Water serves but once only; nor is there as yet any one found who knows how to separate the metals in the solution one from another, so as that the water may still remain good and fit for other the like uses. But as concerning this Water of mine, thus stands the case, *viz.* One Metal may be precipitated after another out of the Water, and each distinctly, and yet for all this, the Water loseth not ought of its Virtue, but may be many times serviceable; certainly it is a most profitable invention, which (in the doing or perfecting some metals and minerals) is to be preferred many degrees before any melting by Fire. For if that there are several Metals of diverse kinds, in one Ore; as Gold, Silver, Iron, Lead (and this often happens so) and they should be forced out by Fire, they would yet remain mixt together; and there's a great deal of work to separate them. For first they are to be cupellated on Tests with a great deal of Lead, that so the imperfect Metals, as the Iron, Copper, Tin and Lead if therein, may go off; then the Gold is to be separated also apart, or by a particular operation, by the help of a separating Water, and this is not every bodies work, nor have all such as are skill'd in the Art, in all places necessary provision at hand. But on the other hand, there needs not in that other kind of way, any thing save the Water and some Glasses, with these may you manage and compleat all the whole business, and get a great deal of gain without noise and trouble. For as to such a one as betakes himself to this kind of work, his Neighbours cannot accuse him, that he will (one time or other) ruine their Fortunes and Houses by Fire, for they hear no blowing of the bellows, nor see they any Coals carried into his House. Nor will the *Smiths* say that 'tis his fault that Coals are so dear, as 'twas objected to him who called himself the little Country fellow. Besides too, he will shun the suspicion of the Magistrates, nor will he give them occasion to suspect him to be a rich blade, and so torment him with the more grievous exactions and with quartering of Souldiers.

And now yet more, This kind of extraction does not only appertain to the getting out the Gold and Silver out of the Ores or Minerals and such as are volatile and crude, and which are every where to be met withal, and may without detriment to any, and with a safe conscience be fixed and separated by the help of this Water: But you may also by the mediation of this Water, profitably and with very small Labour separate all metallick mixtures, such as are mixt at their first forcing out of the Ores, or are melted into one Mass on any other account, and so obtain each Metal pure and free from all heterogeneities. As for example, Put case I have in my hands a certain metallick Mass, which hath in it Gold, Silver, Lead, Tin, Iron, and Copper: Now I would willingly separate the Gold & Silver therefrom: hitherto there hath been no other way known of obtaining it but by cupellating such a Mass or mixture upon the Test with Lead, and so depurating it; in which cupellation, the Copper, Tin, and Iron, do pass together with the Lead into the Test, but the Gold and Silver remain behind, which are to be afterwards separated with *Aqua-fortis*, that you may have each by it self. But the Iron, Copper, Lead and Tin do remain intermixt with each other in the Test, and should you again melt them even by the strongest

ſtrongeſt blaſt, yet will they be commixt, and can hardly be ſeparated the one from the other. But by this way of ours if they be diſſolved in the water together, you may continually precipitate thence one Metal from another, and take them each apart, and not only the Gold and the Silver by themſelves, but the Copper, Tin, Iron, and Argent-vive (each apart).

But it is not ſo neceſſary (if in ſuch a metalline Maſs wherein are contained ſo many Metals, the Gold and Silver be but the ſmaller part) to diſſolve all the other baſer metals together, to get out the Gold and Silver; this will not be adviſedly done, but it would be better, firſt to purify that Maſs upon a Teſt with Lead, and ſo to ſeparate the Gold and Silver by the help of that water, or elſe that Maſs may be burnt with Brimſtone, and the Gold be thence precipitated and depured. But if the Maſs hath leſs of Iron, Copper, and Tin, than of Gold, there will not be ſuch need of purifying the Maſs, by firſt burning it upon a Teſt, and then ſeparating it by *Aqua-fortis*, as is commonly known and uſed to be done; but the whole mixture muſt be diſſolved, and the Gold and Silver, which you pleaſe, be ſeparately, or apart precipitated into a clean Calx, then the Copper alſo apart, then the Tin; but as for the Iron, you may forbear to precipitate that, becauſe there are no great matters to be performed with its Calx, and it will be better to draw off the *Aqua-fortis* thence, whereby it may again be had pure, and fit for uſe.

Then the Iron which abides behind, if it be made red hot, yields a moſt excellent Crocus Martis, and a moſt excellent Ingredient for Chirurgeons, for all their Wound-balſams and Exicatory Emplaſters; it is ſtiptick; it will alſo be ſerviceable to Painters to make exquiſite colours therewithal, ſo that the Iron which is the baſeſt Metal in the whole mixture, if it ſhall be thus wrought upon and brought into good Crocus Martis, yields the money that was laid out upon the water, and yet this very water, after its abſtracting from the Iron is not leſs fit for uſe, but is better than it was before. For in its abſtraction from the Iron, it brought over with it ſome Goldenneſs, which Golden property doth afterwards, in other metallick ſolutions, aſſociate it ſelf to the Metals, is imbodyed, and yields as much Gold as the price almoſt (of the water) afore (thus uſed) couldbe judged at.

So likewiſe there's no need of reducing the Calx of Venus into Copper, but it is twice more precious than other good common Copper, becauſe it can in a few hours ſpace be changed into excellent Verdigreaſe, and ſo is 4 or 6 times the value of Copper it ſelf. Further, it is not needful to melt down the precipitated Calx of Silver without any farther profit, but 'tis better to melt it by the means of the liquor of Sulphur or Antimony; for by this operation will it become auriferous, and be meliorated. Finally, you are not bound to melt even the Calx of Sol, without any profit in melting, but you may even thereoutof draw ſome profit; for if it be amalgamated with the Mercury of ♄ or ☽ it becomes more augmented from the ♄ and ☽; or elſe it may be uſed by the Goldſmiths to Gild withal, and by Painters, if its brightneſs and ſplendour be firſt reſtored unto it, for ſo it may be uſed about Painting or writing. So then, from this operation doth reſult a manifold benefit, and both the Iron and Copper, as alſo the Gold and Silver are rendered better, and more precious than they would have otherwiſe been, if they had been ſeparated each from the other after the common manner, by the fire.

Therefore, there is not only a great benefit gotten in that way of operating, in thus extracting Gold and Silver out of their Ores, and out of the Crude Minerals, and in this ſo compendious a ſeparation of a Maſs (or mixture) of Metals; but alſo, that ſeparation brings more profit than the commonly uſed and perceived way of ſeparating Gold and Silver by *Aqua-fortis* doth, in which way the Maſs is to be firſt burnt to purity, and all the heterogeneities are to be taken away upon a Teſt; then the Silver is to be diſſolved in *Aqua-fortis*, and to be ſeparated from the Gold; this done, then the the diſſolved Silver is to be precipitated either by Copper, or by putting water thereunto, or elſe the water is to be thencefrom diſtilled; from whence, there is not only to be expected no greater profit than what is had (or gotten) out of the Gold ſeparated from the Silver, but withal even half the water is loſt. But now here (in my way) the greateſt part of the *Aqua-fortis* is preſerved, and is indeed meliorated (if there were Tin or Iron in the Maſs) the very bare Crocus Martis only yields as much as the water coſt, & the Flos Æris is meer gains; the Calx of Silver is by a ſolution of Antimony enriched with Gold, the Golden Calx is augmented by Saturn, and Luna, ſo that the gain is fourfold, beſides that Gold which is gotten by ſeparation out of the Silver; and now may not I juſtly call this an Artificial extraction or ſeparation of the Metals, by the moiſt way; but now, like as this is a very notably profitable way of extracting the Metals out of the Ores or Minerals, & of artificially ſeparating them by the moiſt way; ſo likewiſe may the ſame be done in the dry way by fuſion; if (*viz.*) the Minera's are diſſolved by Antimony or Lead, & one of the Metals after another ſhall be thencefrom precipitated; ſo that it is not ſo altogether neceſſary to cupellate ſuch a Maſs, and by the ſeparatory water (or *Aqua-fortis* to ſeparate that, which (by that burning on the Teſt) ſhall have been throughly purged; But if all the Metals ſhall be molten together into one Maſs, there may (firſt) be precipitated the Gold, then the Silver, then alſo the Copper, and by the help of Nitre be rendred pure and malleable; and this too may be done without much labour or coſts; ſo that as well by the moiſt, as alſo by the dry way, all the Metals may be very commodiouſly and compendiouſly, and in ſhort time ſeparated the one from the other by the benefit of Salt-petre. Suppoſe I have a Maſs that has Gold, Silver, or Copper and Iron in it, and I would have it ſuddenly depured; therefore I may only burn it with Sulphur, and by the help of Saturn precipitate one Metal from another, and purifie the Regulus, by Nitre, and ſuch a Maſs though it were 100 pound weight could I ſeparated with the eaſy labour of one day, & for 3 or 4 *Dollars* coſts; but as for ſuch an one as hath no uſe for ſolution & precipitation, or hath not convenient melting Pots and Furnaces, he may granulate ſuch a Maſs, and thence precipitate the Gold, Silver, and Copper, each apart, and draw off the water from his Mars; then the Mars yields him the price of the water; the Calx of Venus yields the reward of his pains and labour, and the augmentation or melioration which happens to the Calx of Sol and Luna in the reduction is clear gain; ſo that the Gold and Silver are, as it were gratis, and without any expence ſeparated from each other, and that both by the dry way and by the moiſt way; for the Silver is equally as well graduated and made auriferous in the dry way, by the fuſion or melting in the operating, or by the transfuſing (or through melting) with the Antimony; ſo then good Gold may by this way be precipitated out of any Silver

which

not aureous, provided the business be but dexterously managed.

In the first part of this Book, (where I treated of the concentration of wood,) I wrote, that a Juice might be pressed, by a peculiar Press, out of any wood, which afterwards might be turned into good Salt-petre by the benefit of the Air and time: I likewise there added some reasons, whereby it might be evinced, that it was possible for Art to perform such things, which are no other but the Rewards Nature her self yields, and that the Salt-petre which is wont to be every where digged out of the Stalls, or Stables of Cattle, is nothing else but the essential salt of Vegetables, and Animals, which is in a long tract of time, and by the hidden virtue of the Air, turned into Salt-petre.

But now if any one should haply perswade himself, that if he exposeth that Juice of the Woods to the Air for some Days, or Weeks, that it will presently become Salt-petre, certainly he would be much besides his aim, neither indeed is it lawful to prescribe Nature the time of her Operation.

Does not a Husbandman deserve to be called Ass, or Blockhead, if some few days after he hath sown his Corn, he should go into his Field to see if his Corn were ripe or not? Just thus are you to conceive of this work, for in all things must you expect the due time, in the Generation both of Animals, Minerals, and Vegetables, so that there is not the least need of any farther proof of this matter: For every Generation requireth its own proper time.

But, that very many haply have wearied themselves with imagining about that kind of Press, which I have mentioned in the first part of the *Prosperity of Germany*, and yet have not found it, is not to be much wondred at. However it is assuredly true, that such a Press may very easily be prepared, by which you may daily press a great quantity of Juice out of Wood, be it believed or not believed. But seeing that such a Press hath been seen with me, and hath been beheld prepared, and wood squeezed out therewithal, and set to ripen in the Air, sure it cannot be long ere the truth will manifest it self and publickly vindicate it self from all its slanderers.

I say again, that such a Press is found by me, and that it is an artificial one, and is of less costs than will be easily believed. Nay more, every day brings forth new and better Compendiums, so that there will not hereafter be any use or need for the Press, to squeeze the wood out by: but every Vegetable and Animal, may without labour and trouble be in a short time, and without the press, transmuted into good Salt-petre, so that many hundred weight of Salt-petre may be generated, or produced (by the labour of only one person) out of the bare Wood, Leaves, and Grass, (where they may commodiously be had) and yet 'tis not the person aforesaid, but the air that causeth this Generation: for the person doth no more but expose to the air the subject matter, upon which it may operate, and out of which it may bring forth Salt-petre.

But there is nothing which I admire more at, then, that this present Age is so sluggish and averse from searching after the secrets of Nature. Whereas, were but the Properties only of that stupendious, or wonderful subject Salt-petre, well known, there might well be a forbearance of reading many Chimical Books seeing that by it alone may many wonderful things be performed. I have a little afore shown, how both a moist and dry extraction of Gold and Silver, & the other metals is to be done by Salt-petre; and if Nitre were of no other use but this only, yet were it well worthy to be beloved and esteemed by all, and they should as much as in them lies labour not only to produce it in plenty out of vile things, but withal to know how to make use of the same with profit.

But whereas I have not so very openly and clearly described, or published the precipitation which is done as well by the moist, as by the dry way of the extraction and separation of metals; I would not that any one should take it in evil part; for there are exceeding weighty reasons, that make me fear to prostitute such excellent Inventions, or to chew meat (as it were) and thrust it into every Asses mouth. Let it suffice, that I have shewed, that such things are possible. But yet the Art lies not so fixed in my breast, nor is it my mind to suffer it to lie buried with me: No, God hath blessed me therewithal meerly for this end, that I might help and succour others, to the performance of which, I am most ready and willing; but yet not every one without any exception, but such as are ingenious Lovers of the Wonders of God, and know how decently to use all things, least I being too improvidently liberal, should put new Weapons into the hands of mine enemies.

I could have buried-over these things in silence, and haply been at more quiet, but it was no ways possible for me to suppress the wonderful Works of God, so as to withhold them from coming abroad to light, and to the view of Men, to the Honour of God. And whensoever it so comes to pass, that the things delivered at present in this second part, and which shall be delivered in the following third and fourth parts, shall be believed, and be brought to effect and be done: then all the crew of Slanderers and Enemies of the truth shall be confounded with shame, before the whole World, and that Genuine Alchymy, shall again be embraced, and honourably flourish: For Salt-petre must be the Master, as *Paracelsus* saith, in a certain Chapter where he treats of common salt, and mentions Salt-petre with a commendable Testimony. Nor hath *Basil Valentine* done a less faithful Work as to his Nitre; but few there are that understand it.

I am not of the mind to boast of the knowledge of many things, but yet thus much I find, that there is not in all nature any subject given that may in good deed be compared with Nitre, as to eminency or excellency; much less deserves to be preferred before it. Let not the Lover of this Art be disquieted in his mind, so long as there are two parts to follow, and come forth: For then men will see, and be even enforced to confess these things which afore they did not believe. And upon this score do I shorten this part, that I may the sooner come to the third and fourth parts: In which parts (God willing) there shall be discloses many most highly profitable inventions for the benefit of mankind, but yet they shall be veiled, after that same way and manner, as others afore me have used to do, that so Pearls may not be cast afore Swine.

But that I may return to my purpose, and shew that what I have said is true, and that great things may be done (as to the melioration of Metals) by the help of Salt-petre, it will be necessary, that those things which we have already written in this second part be made a little more clear, and may be visibly demonstrated to the unskilful and incredulous, in what it is, that this profit we at present speak of, is seated.

And first, as concerning the Generation of Salt-petre, there hath been enough said already, *viz.* That it may be prepared by heaps out of otherwise-unprofitable Wood, Shrubs, Briars, *&c.* which rather endamage the Ground, than do any good, because they become a refuge for cruel Beasts, which sustain themselves upon the great ruining of the other Wild ones: Nor needs this work any greater costs than to cause a House to be built in the Woods, under which the wood, together with the circulatory Vessel, may

ſtand dry; and beſides too, one man is ſufficiently able to manage the whole buſineſs, nor is there any thing elſe required but thoſe unprofitable underwoods, or Briars, *&c.* or if you have not ſuch, then, the Leaves that the wind blows off from the Trees. And if alſo you add ſome Salt thereunto, even it will be likewiſe turned by the help of the wood into Salt-petre, and hereby will ariſe a greater profit: Neither is there any neceſſity of taking the Salt we uſe to ſeaſon our meat withal. But yet if you can have it in plentiful quantity (as may be in many places of *Germany*, where it much abounds) it will be well, but if it be not to be ſo eaſily had, the wood it ſelf will make Salt-petre enough; nor needs there any other thing, but to begin the work, and let Nature alone to perfect it, and to produce the Salt-petre. But farther, as *Germany* doth never want ſtore of wood, ſo wants it not ſalt, for there are whole Mountains of ſalt, which to exhauſt, is a thing impoſſible; eſpecially in the Territories of the Arch-biſhop of *Saltzburg*, in the Elector of *Bavaria*'s Country, the Dioceſs of *Berchtsgaden* as we call it, which places, beſides their abounding with Salt, do alſo abound with ſtore of Wood. Have I not reaſon to believe that great Treaſures and Riches may be hence reaped. Salt they have at their Feet, and vaſt Deſarts at hand, which are of no uſe: O improvident Mankind! What account ſhall we give that ſo behave our ſelves in our Stewardſhip. Would it not be much more praiſe-worthy to have drawn forth thoſe Treaſures, to the Honour of God, and not to have ſuffered them to have remained without being uſed, and unmanaged; what is the greatneſs of the charge requiſite to the carrying on this Work that deterrs them? What expence I pray is it, ſeeing that a little ſhead may eaſily be built in the Woods? And beſides, where great Woods, and many Trees are, there are alſo found Minerals both ripe and unripe, and the ripe may be forced out by Wood, or Coals, the unripe may be fixed, or ripened by the help of Salt-petre, and the Gold and Silver alſo may be afterwards thence ſeparated by the Salt-petre.

And now I pray, would not the Country be enriched hereby with vaſt Treaſures, and ſtore of Wealth? But put the worſt, if every Country did not abound with ſtore of Wood, yet hath it a great deal of ſuperfluous Graſs and ſtubble, and this yields as good Salt-petre as the Wood does. And if in caſe every Country, or Seignory had not Minerals of their own, which might be ripened by Salt-petre, and from whence Gold and Silver might be drawn, yet nevertheleſs may they be had out of the bordering Provinces. Nay more, if ſo be the already excocted Metals ſhould be advanced to a maturity by the means of Salt-petre, yet would not even this kind of work be without an acceptable gain, and it would be better for us ſo to do, than to hang them up at the Walls in our Houſes, for Ornament, and Pride's ſake. If an Enemy comes, one Ounce of Gold, is better than a Thouſand pounds of Tin, or Copper, which the owner thereof muſt neceſſarily be conſtrained to leave behind him, whereas he could carry away the Gold with him; which kind of concentration we ſhall treat of in the following third part: and in the fourth part ſhall be taught, by what means even Gold and Silver may be concentrated, that ſo it may lie hidden from the Enemy, and be tranſported (under another kind of form or ſhape) into ſuch places, where it may be free from the Enemies Clutches.

And farther, that water which we ſpeak of, ſerves not only to extract Gold and Silver out of the Ores, or Minera's, (which otherwiſe, could not be drawn forth by any excocting or forcing) but alſo for the taming, and bringing to uſe that which is in huge Stones, Flints, and the baſer Foſſiles (in which, Gold and Silver are only as it were, a little ſticking, and will not be thence had by any art of melting) and that with profit too well worth the Labour. So that there is ſcarce required 6 or 7 Loths of water to extract the Gold and Silver out of 100 *l.* of Ore; and if there were but 2, 3, or 4 Lots of Silver at the moſt, in 100 *l.* of ſuch matter, yet would it be a gainful extraction, eſpecially if the things, or ſubject, be Arſenical, or as yet Volatile, and cannot brook the intenſeneſs of the fire, but are driven away by a ſtrong blaſt. *For in that extraction by the water, that which is volatile, is fixed, and retained together*, that it afterwards admits of being fuſed, or molten, and that this is ſo, will evidently appear to any, experimentally. Let him but take Arſenick, and diſſolve it in Aqua-fortis, and again draw off the water, and he will be able preſently to melt the Arſenick, and make it red hot. Quickſilver is well known to be a very Volatile matter, but yet even that, (if the water of Salt-petre be ſeveral times drawn off thencefrom) is made ſo fixt as to ſtand and abide wholly in a moſt intenſe fire. For, that which Wood and Coals do (in a long time) perform; the very ſame doth ſuch a water effect in a few hours ſpace.

But ſome or other may oppoſe or queſtion thus; How can it poſſibly be, that if thoſe matters be ſo very poor, 8 or 10 pound of water ſhould be ſufficient to extract the Gold & Silver which is contained in them; for it ſeems as if 8 or 10 pounds of water were hardly enough to moiſten 100 *l.* of Ore or Minera, but would be loſt amongſt ſuch a deal of Stuff: Let ſuch an one know, that what I have written is poſſible and true; I can prove it and demonſtrate it even to the ſight; but as concerning the adminiſtration of that Work, 'tis not fit it ſhould be made too common.

And verily, in this ſticks the main difficulty, here is the Art and Skill; 'tis not for every one to acquit himſelf here, and if that the gold and ſilver were extracted by means of this Water, yet even then the chiefeſt of the Art is to know how to precipitate the pure Gold and Silver thencefrom, and incorporate it, which knack I juſtly reſerve for my Friends; for verily, this is ſuch an Art, as by the benefit of it alone I ſhall renew ancient friendſhip with many, and moreover purchaſe me more new friends: And therefore let no body be angry at me, or count it amiſs, that I would not publickly diſcloſe ſo excellent an Invention, and put new Weapons into mine Enemies hands to hurt me withal. [*This is taught in the following parts.*] And if I ſhould do ſo much as clearly to mention every thing, yet nevertheleſs ſhould I incurr the enmity of many men, as much as if I never had done it; and beſides too, it cannot poſſibly be, that all things ſhould be ſo nakedly and plainly decyphered to the unskilful, as that they ſhould preſently be able to do every thing. If they once make trial, and cannot do the buſineſs that they aimed at in their minds, then they curſe him that writ, and beſtow many a bitter wiſh on him, as if he had been too obſcure in expreſſing himſelf, and ſo they deſpiſe that which is otherwiſe laudable.

But if ſo be that the poſſibility of a thing is only demonſtrated, and no Receipt added, then they will not undertake any fruſtraneous Labours, nor will have cauſe of curſing any. But ſome or other may here enquire, Where ſhall I find ſuch a ſort of Minerals and Foſſiles, out of which I may extract Gold and Silver? If any ſuch had been to have been found, they would not have lain idle & waited for my coming; others would have taken them away long ago, and converted them to their own uſes. I think it expedient to demand as well of ſuch a one, who thoſe others ſhould be, that ſhould have taken them away before thee? If their Experience be as little as thine, and thine no greater than is theirs, there's no danger of your fore-preventing

ing or deceiving one another, seeing you are all alike ignorant of the thing.

Think'st thou that the number of those that are experienc'd in Metals is so large? 'Tis confest, there are enough Excocters or Metal-Separators, but yet they must *per* force leave that untouch'd which they cannot find out, seeing they know no other way of ordering their Affairs, but the old Road. It oftentimes happens, that there is more Gold driven away into the air by these Excocters, than is left behind in the fire, and yet forsooth that Crew arrogate to themselves abundance of knowledge, and perswade themselves, that they stand not in any need of any ones advice. Nor indeed do I invite them to any new Studies and Operations; let all such as list, use the same way of excocting or separation that they have learned; but if there be among them those that are not ashamed to learn better, such may be counselled. My purpose at present is, to do some acceptable Service to those that have no Mine-pits, and who cannot separate Minerals or Ore in gross, as I may say, and yet would be very glad to enjoy in private some little small gleanings as 'twere of the bits or small pieces that the Excocters leave, whereby they may get sufficient gain for the commodious sustaining of Life. These are they whom I have a mind to assist; the Richer sort have enough already to fill or satiate themselves withal; nor need they any information of mine; as for the Poor, there's no regard had to them. The whole Artifice therefore consisteth in the extracting (when there's but a very little Water used) and then in the precipitation of the Metals, so that the Water may remain good, and fit for other uses. There's plenty enough of poor Minerals and Fossiles even every where, and which no body regards and knows. It would not be amiss to look upon or consider of all Flints, Rocks, and Stones you meet with, and consider what property they are of.

Concerning this I have written in the First Part of the *Mineral Work*, *viz.* How by the Spirit of Salt Gold may be extracted out of a Flint: But as hitherto, few there are that have set about that Work, partly because they could not prepare the spirit of Salt, and partly because they knew not how to precipitate from it the extracted Gold, nor knew how to melt the extracted Calx of *Sol* with Antimony; all which I must needs confess, is not for every one to perform. But now this Extraction which is made by the Water of Salt-petre, doth extract the Silver too, which being thence precipitated, the water remains as virtuous as afore; and indeed, if a comparison be made 'twixt this and that Extraction, there is as much difference as is between black and white, and between the day and night; therefore I say that this is a thing worth the learning, for it may be of exceeding much profit in times of affliction. Greatly is that pledge to be esteemed of, *Which* (as the old Proverb is) *redeems its Lord.* Art is no burthen to a man to carry, but it rather carries or bears up a Man, easeth him, and makes him be of a cheerful mind, because it is a thing on which we may safely trust. It is more precious than Gold and Gems, which may be lost, but this abides firm and constant even to the Grave, and doth abundantly enrich its master.

This Extraction doth likewise serve for the drawing forth Gold out of Silver, tho' it be not gilt, which to do is not in every ones power, tho' many know that Silver hath Gold in it, yet if it be not of so much value as to quit the Costs that are necessarily to be expended upon it, it is left as it is; and now there is no where separated Gold out of Silver, unless it be gilt, and they see it sticking thereupon. Any other silver whatsoever, how much gold soever it possesseth, is not separated, when as though, sometimes there might be made more gain thencefrom. But I must needs confess, that the separation of the Gold from the Silver, the usual and known way is conjoined with abundance of labour, and not worth the costs spent about making the separation, unless, haply, the silver partakes much of the Gold: Whereas on the contrary, this my way of separating is done with light labour and small costs, and therefore may be used about all silver whatsoever, though it has in it never so little Gold.

But that the business may be yet more clear, and the better perceived, it will be useful to add this information. When you would separate the Gold from the Silver by Aqua-fortis, it must first be purified with Lead, by burnnig it upon a Test, now in this work there's the Test, Fire, the sufficient portion of Lead, the labour and time spent hereon to be considered, and when all this is done, then the Lead has entred, together with the Copper that was in the Silver, into the Test, and may be esteemed of but as a thing just kept from being lost. Besides too, the Copper carries away with it, a good part of the silver into the Test. And altho' that by a most vehement blast of Bellows the Test may be molten, and part of the Lead, Copper, and Silver recovered, yet the expences necessarily requisite to this operation, are more than the regain'd Metals are worth, so that these costs, charges, and troubles are too great. Then finally, when all this is done, and that the silver shall have been depured by burning, then it must after all this, be granulated, and this is some charge, and then when all this is done, it may be separated by Aqua-fortis, and being separated, be again molten into a Mass.

Now my way of working is freed from all these kind of linked labours, and so much trouble and loss of expences and time may be avoided; for when I take on me to separate any Silver, whether it has much or little Gold, I cut it into bits about the length and bredth of my Finger, so as that I but put it into my separatory Vessel; then I make it gently or by degrees red hot, to the end that the defilements may be the better washt off, and the separatory water may the better work upon it. Then pour I in the water, and suffer the Gold, Silver and Copper to be dissolved; then (after this) do I precipitate the Gold, then the Silver, then the Copper; all which operations, from the beginning to the end, are done in three or four hours space, nor requires it any expence save only the water, and a little fire, to keep the water warm, that it may the more strongly work upon and dissolve the Silver; the Metals thus separated from each other and edulcorated, may be melted; and now from thence may any one see, how much difference there is betwixt ours and the common separation of metal, by the moist way; and if there be any one that would use this way of mine, of separation, he would doubtlesly get much gain and riches, neither could any one endammage him by way of prevention, and he would get himself an exceeding profit wheresoever he be, not only out of guilt Silver, but also out of any other; for there is not a City so small, but it hath a Silversmith, who buys up the old Silver, and separates it his own way, which is very laborious and costly, and therefore he would the willinglier give his Silver to another to separate, whereby himself might be spared the labour and cost, were there but any one that would offer him his help thereabouts.

And seeing that all Copper holds Gold hidden in it, and that that Copper is not any impediment in this my way of separation, but is resolved together with the Silver, therefore doth it always bring some increase to the Gold and consequently more gain; but the labour will be yet more gainful if it be prepared with a separatory water, which hath other Golden species or things added thereto in the making, and which render

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the water aureous, ſuch as are Lapis Calaminaris, Zink, the Minerals (or Ores) of Iron and Copper; for hereby is made a water that is in it ſelf auriferous, and which doth readily (in the ſeparation) join its volatile Gold to the Silver, and ſuffer its ſelf to be incorporated; in ſo much that even ſuch Silver as hath already been ſeparated and purged, will yield Gold enough in the ſeparation, if it be diſſolved with ſuch a ſeparatory water, which hath been impregnated by graduating things.

And even as this ſame extraction which is done in the moiſt way, by the water of Salt-petre is exceedingly eminent and of much uſe, as being ſufficient to ſupply many thouſands of men with food and neceſſaries for life, ſo as that they need not at all to be compelled to deceive or damnify one another; ſo likewiſe, no leſs excellent is the extraction, which is done by the dry way; if, *viz.* the Volatile Antimonial Mineras, or Ores (whether they contain in them Gold, or Silver, or Copper, Iron, or Tin, and what metals ſoever they contain in them) be molten with twice, thrice, or four times as much Antimony in a Crucible, and be (by the means of Iron) precipitated into Regulus's; for by this work, what good ſoever there was in the Ores, and even the Metals themſelves, may be obtained each apart: for when the Antimouy hath extracted the Gold out of the Minerals, the Gold may then be firſt precipitated, then the Silver, laſtly the Copper; and all of them with a very ſmall coſt and little labour, inſomuch, that in one days time many pounds of Gold and Silver may be drawn by this art out of the Minera's: and this too by a little fire. For the Antimony penetrates the mineral like water, and diſſolves what is good in it; and as for that which is of an earthy nature it caſts off from it ſelf, and brings it into ſcoria. But it brings the Metal to a Metalline form in the precipitation, which muſt then be cupellated, or purified by the help of Salt-petre. And if haply you cannot get Antimony for this work, than common Brimſtone may ſerve in its ſtead, and it will perform the ſame thing, if the Minera be ground and mixt therewith, and be molten in a covered Pot or Crucible, and be precipitated by Iron, for ſo the Metals falls down in a Regulus, and the Sulphur abides behind in the ſcoria. But this kind of work requires a skilful Artiſt or Melter, who hath already been long and much verſed in precipitations; for elſe he will be intangled therein, and not find the wiſh'd for ſucceſs.

NB. This is to be underſtood of that kind of Minerals and Foſſiles which partake of *Antimony*, *Arſenick*, *Cobolt*, *Marchaſite* or *Sulphur*, being ſuch as *Antimony* and *Sulphur* love to ſeize upon and diſſolve in the melting: ſuch Minerals or Ores as have ſand and ſtones among them, they (*viz. Antimony* or *Sulphur*) will have nothing to do with them; of this kind are Granates, Talk, and ſuch like: ſo neither, doth the water of Salt-petre in the moiſt way extend its virtue to all the Minerals, nor extracts it Gold and Silver out of all of them; but eſpecially it acts not at all on them which are very ſulphureous, unleſs they are firſt Torrified or Calcined as 'twere, and ſo freed from the *Sulphur*, then at length the water performs its office elſe not. Nor doth the water act upon Granates or other Minerals and Foſſiles which are (as to the outward appearance) ſmooth and as it were glaſſy. And therefore all ſuch muſt firſt of neceſſity be maſter'd by an incenſe fire, and ſubdued.

There are likewiſe to be found ſome Minerals and Foſſiles which ſuffer not what they have in them to be introduced into either Lead or Antimony, or to beſtow their Treaſure upon them; nor will they be forced out nor cupellated, but both are and remain ſcoria, and do retain that form of glaſs which they afore had, unleſs haply you make them ſtoop, and maſter them by a moſt ſtrong blaſt; for by this means they ſuffer their Gold and Silver to be wreſted from them: But they may be maſtered too, if you thereto add in the fuſing ſome Potters-aſhes, or ſalt of the Lees of Wine, or Aſhes made of Wood, and melt them together, for ſo by this means alſo will they be obedient to thee; for ſalts diſſolve in flux all ſtony Minerals, and ſuch as reſemble glaſs and ſcoria, which otherwiſe no other fire is able to do. But to make any more accurate deſcription of that thing, appertains not to this place, but to the following Third Part of this Book; that which we have here minded, is only to make light touches as 'twere about ſhewing the variety of Foſſiles and Minerals; and that, if haply any one ſhould light on ſuch a Mineral, out of which he cannot extract the metal, neither by the help of Antimony, nor by the water of Salt-petre, he ſhould not think it void of every thing or that he has not dexterouſly and conveniently enough handled the ſame, but may know, that the only cauſe is, the property of the Mineral it ſelf.

And now, even as the Sulphureous minerals do cheifly admit of being ſeparated by Antimony admixed in the melting, and thoſe that are ſtony, not ſo; even ſo the water of Salt-petre doth more willingly extract the ſtony Minerals, than the ſulphureou ones; but yet, if the ſulphur be taken from them by Torrefaction, it is able to diſſolve even theſe too.

But it chiefly loves thoſe that have Stria, and are a ſpotted (Quartzig) ſandy, poor kind of Minera: which (otherwiſe) you cannot extract commodiouſly neither by Fuſion or by Mercury: But that you may never be deceived here, it will be altogether expedient to be acquainted with both ways, both with this which is done by flux, & with that moiſt way which is done with Water; both ways are good, and exceedingly profitable in the ſeparation of the Minera's or Ores; and that not only of ſuch as may be every where had, but likewiſe of metalline mixtures: whether it be by melting them together, or elſe by ſome ſad miſchance of your Houſes being burnt; or finally, if it proceed from thence, that Gold and Silver do lie hidden unknown in copper, Tin, Iron, or Lead; now they may with eaſe be ſeparated from each other by both thoſe aforeſaid ways, and on ſuch wiſe as that nothing may be loſt.

The ancients knew not how to extract the Gold and Silver out of Copper as the modern Refiners are wont to do, but took them together as they lay, and ſo applied them to any uſes whether to make Bells or great Guns. Neither was the ſeparation by *Aqua-fortis* ſo much in uſe in thoſe days as in ours: Nay more, if in a Mark of Silver there was no leſs than the quantity of a Ducket of Gold, yet notwithſtanding they did not ſeparate it, but did make it up into money as it was, as the old Coins do ſufficiently teſtify. For it is evident that all Silver almoſt, partakes of Gold, and ancients being unexerciſed and not well verſed in the Art of ſeparation, all the Silver though never ſo auriferous was Coined into Money, or put to other uſes; but their ſucceſſours ſmelt out what they had done, and therefore bought up all ſuch Money, and ſeparated it, & made thereof an exceeding gain: ſo that there is not in our age ſo much as a Dollar, Schrenckbergick, Groſs, Crucifer, even to the ſmalleſt half Penny, of Gold Coin to be had throughout all *Germany*, all being changed and bought up and wiped off the Gold. But yet there is Silver enough left, both made into money, and wrought up by the *Gold-ſmiths*, a Mark whereof contains, $\frac{1}{8}$ or $\frac{1}{4}$ of a Ducket of Gold; and therefore ſeeing the common way of ſeparation by *Aqua-fortis* cannot be of uſe here, becauſe the coſts are too great, and the little portion of the Gold will not countervail the ſame; it may be done this way, and ſeparated by either the moiſt, or by the dry

dry way, and that with profit, though there should be less than $\frac{1}{8}$th part of a Ducket in a Mark of Silver. And besides, Bells ever have much Silver in them, neither was it separated therefrom by the ancients (as we have said afore): and likewise old Tin hath a great deal of Gold and Silver in it, which was of old wont to be molten and wrought up with the Copper into Bells or great Guns. Many there are that well know, that there is Gold and Silver in these things, but how to extract them thence, they know not: For Copper admits not of being cupellated (or purified) by Lead, much less of being separated, & yet more difficult is it to do it by *Aqua-fortis*. But yet, it may be effected and that with a great deal of profit by the way which we have shewn, both the moist and dry too. And therefore he that shall be well skill'd in these operations, doing it either by melting with Antimony, or by the Water, will get abundance of profit out of your old and broken pieces of Bells: Nay should he buy them whole, yet would he get no small matter, for he may extract their Gold and Silver, and then melt them anew. For there is not barely in Bells that portion of Gold & Silver which the Copper and Tin had naturally in them, and of which the Bells are made; but also, it was the custom of the ancients, (when a new Bell was molten or founded,) to call some God-fathers or Witnesses (according to their ancient custom) who named the Bells afore they were baptized: And like as it is even at this day the usual custom every where throughout Christendom in the baptizing of Infants for the God-fathers to give their God-child some Money (or Plate) as a remembrance; so the ancients did do in the baptizing of their Bells, as they were flowing in the Furnace they cast thereinto Gold and Silver, to testify their affection to Holy uses, and also that the Bells might fuse the better, and yield a clearer sound. Upon this account I say, that 'tis no small gain that may be gotten out of old Bells, seeing there never is a Bell which is destitute of Gold and Silver.

And now the well-minded Reader sees what use this extraction and precipitation of Gold & Silver which is done either in the moist or in the dry way, is of; and that not only in Minerals and Fossiles, but likewise in metalline mixtures too, out of which there can nothing be obtained by any other way.

Who I pray will not now magnifie or highly esteem of Salt-petre, and take care about having it prepared in great plenty, and so convert it to his profit, seeing it is clearly manifest that so much good may be done with it both in Metalline Affairs and Medicine? I do what I am able, I offer my self to all good Men: If they will not listen to me, I am not to be blamed but am void of fault. Man's Life is too short, than for one Man to be able to describe all the things that may be done by the help of Salt-petre; neither indeed is it to be wished that many should know it.

But seeing I but now treated of the precipitation of Metals and Minerals, I think it worth while, to shew the cause of that precipitation, that so the studious of Art may have a more certain foundation of this thing. That which is to be separated, must of necessity be a bound up or fast knit body, for else it would not need any separation; therefore forasmuch as one Metal knits up, or incloseth another, they cannot be separated from one another, but by the breaking or destruction of the bonds which they are tied withal, and knit each within another; this destruction now, is to be done by the Fire, both in the moist and likewise in the dry way. Copper, Tin, Iron, and Lead, may in the dry way be separated from Gold and Silver, if they are Cupellated together on a Test: For then the superfluous or burning *Sulphur*, in the imperfect Metals, acts upon it self and reduceth its own proper Body or Metal into Scoria, and seeing that there is a great part of Lead therein, those Scoria are fluxile, and it doth by little & little (as much of it as goes into scoria) insinuate it self or slide into the porous Tests or Hearths. But the Gold and Silver which have no superfluous *Sulphur*, do remain unhurt upon the Test, washt and clean, & do now shew themselves in their clarity & brightness; This is the separation of the good from the bad, or the combustible from the incombustible, which is done by the force of Fire only, and solely: by which, the imperfect Metals are by the help of Lead converted into brittle scoria, and so creep into the Tests, and separate themselves from the perfect Bodies; and this is a very easie work, and well enough known to every body, and is by the Refiners called Cupellation. But now in this separation, there's only a separation made of the imperfect Metals from the perfect, but the Gold and Silver remain mixt together, and if you would have each apart too, then 'tis necessary that the one be dissolved and separated from the other by a most strong *Aqua-fortis*. But if the portion of the Silver be more than the Gold, then the Silver is dissolved by a common *Aqua-fortis* made of Salt-petre and Vitriol, and so the Gold will fall to the bottom: and this way of separation is well enough known and used by all the Refiners and Goldsmiths; but if there be more Gold than there is Silver, then do they dissolve the Gold by *Aqua-regia*, and so the Silver remains undissolv'd; nor is the *Aqua-regia* any thing else but a strong water of Salt-petre, in which some *Sal-armoniack* is dissolved; for the common or simple water of Salt-petre doth dissolve the Silver only and leaves the Gold; and contrariwise the *Aqua-regia* dissolves the Gold only, and meddles not with the Silver; but if they know not the right way of ordering the *Aqua-regia*, they are wont to add to the Gold in the melting so much Silver as may make up three times the weight that there is of the Gold, and so they separate it by *Aqua-fortis*, which (kind of operation) we call (die Quart).

There is yet another way of separation, which is known unto them, and this is done by Cementation, if (*viz.*) divers Metals are commixt together, and they are mixt with Vitriol, Salt, and Tiles, *Stratum super stratum*, and so kept together a while for some due time in a continual fire; then the Salt and Vitriol do assume to themselves the imperfect Metals, and leave the most perfect, that is the Gold, alone. Cementing doth also attract Silver and Iron, Copper and Lead; but this kind of separation is only used to impure Gold, perfectly to purifie it.

There is yet another way of separation, which is done by Antimony, and is likewise only used to Gold, to cleanse it from its impurity and vitiosity. There is also another way of separating by fusion, in which, if you would have a metalline mixture which hath Gold, Silver, Copper, Iron, Tin, and Lead in it, to be separated into its several kinds, then the mixture must be granulated and burnt with Sulphur, and being burnt, it must be melted in a Pot, and so by precipitating it either with Lead or Iron, one Metal must be separated orderly from another; which way is wont to be used (as far as I know) but by few, because they are not so understanding in Nature, nor know any cause why one Metal separates it self from another, sooner and more readily out of the mass or metalline mixture, and settles to the bottom.

But that the ingenious Lover of Art may have some directory, as 'twere, and some occasion to consider with himself more deeply, and may have a willingness to undertake so excellent and profitable an Art, I have a mind to discover the cause of the precipitation. It is sufficiently evident, that *like rejoiceth with like*, and that there's a disagreement 'twixt unlike things. Oil loves to be mixt with Oil, & Water is willingly united with Water, but not at all with Oil, lest by a *medium* intervening. Hence it is, that forasmuch as one Metal is of a different nature from another, that such as are alike, love each other, and such as be unlike do abhor and shun each other; and therefore when there are divers Metals in one mass, and that you would separate them, it is necessary that you do it by adding such a thing as is of affinity to the more imperfect part, and is at Enmity with the perfecter part. As for examp. Sulphur is a friend to all the Metals, save Gold, and that it hates; but yet it loves (even in the imperfect Metals) one better than another: for by how much the more like they are thereunto, and the more imperfect, so much the more rea-

dily is it a friend or enemy thereto. And therefore when the Sulphur ſhall have been put into the maſs in the combuſtion, then the moſt noble parts flie off, and do their beſt to free themſelves from the fellowſhip of the imperfect and unclean metals; but yet they cannot rid themſelves without ſome aſſiſtance; and therefore if ſome ſulphureous or imperfect Metal ſhall be put to the ſulphureous maſs, then the ſulphur laies hold upon it, and lets go the more perfect part, tho' not ſo pure as yet, but it needs a greater purification; concerning which there may be read more at large in the Explication of my *Miraculum Mundi*. This work is called *Precipitation*, when the more perfect part is precipitated and ſeparated from the more vile, and that out of one and the ſame mixture. The ſame reaſon is there in the precipitation made in the moiſt way, if (*viz.*) *ſome* Metals, or *all* together, be diſſolved in the water, one is thence precipitated after another orderly. Firſt, That which is the moſt noble and moſt perfect, then the 2 & 3, and ſo regularly, until they are all precipitated. This is that moſt excellent and hitherto wholly unknown, and moſt gallant Invention wherewith I hope to become ſerviceable to my Friends.

He that well underſtands this precipitation, will gain much, but if he only meddles with this operation in a careleſs manner, and meerly cuſtomary as 'twere, and ſo not know the reaſon it ſelf, why ſuch, or ſuch a thing is, he may worthily be compared to an Aſs that carrys a ſack, but knows not what is therein contained, nor whither he is to carry it. Therefore I will yet farther add a more clear information. Iron precipitates Copper out of both the dry and moiſt ſolution; Copper precipitates ſilver both in the moiſt and dry ſolution: *Mercury* doth chiefly precipitate Gold, and altho' Copper, Iron, Tin, and Lead, do alſo precipitate Gold and Silver, yet each Metal hath its own peculiar precipitation, and farther note, that Precipitations done with Salts do exceed thoſe done with the Metals, for by them may all the Metals be precipitated; and this hath even hitherto been kept ſecret.

And beſides, one Metal does not only precipitate another, but doth likewiſe change or alter it. As for examp. If I put the Plates of Copper in a ſolution of Silver, then (whether the ſolution or operation be done either in the moiſt way or in the dry way) the ſilver precipitates it ſelf by means of the Copper. And if I but know how to manage that buſineſs knowingly and skilfully, the Silver will alſo graduate ſome of the Copper into Silver in the precipitation, and there will be gained more ſilver than was put in the ſolution. In like manner, if I precipitate Copper with Iron, out of a ſolution of Copper, then doth the Copper precipitate it ſelf by reaſon of the Iron, but withal, ſome part of the Iron doth exalt it ſelf in the precipitation into Copper; and ſeeing that this kind of operation is confirmed by often Experience, there is none can ſafely queſtion it. But I do not ſay, that in ſuch a gradation all the Iron is turned into Copper, or all the Copper into Silver; nor did I ever try it; but yet I readily believe, that it is a thing poſſible to be done by reiterated workings. Mercury precipitates Gold moſt willingly, but only in the moiſt way, for in the dry way it cannot ſubſiſt; but to precipitate it in that way, Iron ſerves excellently well; Copper alſo and Lead are profitably uſeful hereabout alſo, but yet Iron is better.

There is a ſingular precipitation of Silver with Mercury, which I will here mention. The Chymiſts ſome hundreds of years ago, made Silver out of Cinnabar, but without any benefit or profit; neither did their ſilver they got come from the Mercury, but from that ſilver which they added to the Cinnabar. They took common Cinnabar, made of Quick-ſilver and Brimſtone, and brake it into ſmall bits, about the bigneſs of the Nail of ones Finger, and made Layes, or *Stratum ſuper ſtratum*, thereof, with filings of pure Silver, then they luted up all well, and kept it in a moderate heat for 20, 30, or 40 hours, and by this way they found that their Cinnabar, which at firſt was red, was made black; this matter they cupellated with Lead upon a Teſt, and ſo got as much Silver as was the weight of the Mercury in the Cinnabar.

NB. As much ſilver as they got, ſo much wanted there of the ſilver they put unto it, and ſo there was no Gain made from hence; and they ſuppoſed (but falſly) that the Quick-ſilver extracted the ſoul out of the ſilver put thereunto, and that therefore the ſaid ſilver was rendered volatile. Nor indeed is it contrary to Reaſon, that *Argent-vive* ſhould extract the ſoul from Silver, & thereby convert it ſelf into ſilver; and that on the other hand, this exanimated ſilver be made wholly volatile, if it be not animated anew by other Metals; and this is what ſome have done and attained to, by the help of Lead.

But the Operation which I treat of at preſent is rather an attraction or precipitation of ſilver by Mercury, and this precipitation is to be done in the moiſt way, and is moſt wondrous eaſie; nor is it without Encreaſe or Gain, provided you are willing to wait its time, and 'tis thus.

If one part of purer ſilver be diſſolved in *Aq. fortis*, and in the ſolution two parts of Rain-water be added to one Part of *Aq. fortis*, and there be likewiſe thrown in three or four parts of Quick-Mercury, and all this be left ſome daies or weeks in a cold place, unmoved, then the ſilver precipitates it ſelf out of the Water to the Mercury, and the Mercury diſſolves it ſelf into the Water, and both together yield a wonderful repreſentation of growing things, like Mountains and Vallies, and certainly is of a moſt pleaſant aſpect. The reſult of which is this, *viz.* if they ſtand ſo a long time and ſhall be afterwards edulcorated and reduced by Lead, then the Silver gets no ſmall encreaſe from the Mercury: But yet there's no gain to be thence had unleſs thoſe out growings (or repreſentations of fine things) be ſuffered to operate and germinate above a Year: And this, few operators will yield to do, and to be withheld ſo long a time from the fruits of their Labours. Now the reaſon of this operation is thus: The *Aqua-fortis* is a moiſt and cold Fire, and ripens as well as the dry and hot Fire, but he need be a skillful Artiſt that ſets upon this Work.

It is evident that ſome of the ancient Philoſophers maturated their Univerſal Medicine by a moiſt fire, as you may ſee in *Artephius* and others. Otherſome Philoſophers extracted a certain ſecret water, or univerſal Menſtruum and diſſolvent out of the Nitrous Sea, and did thereby perform moſt notable things, but they always kept it ſecret, and the deſcription they have made thereof, hath been obſcured, or painted over with Riddles, or dark expreſſions, when they ſay, that ♄ draws his ſecret water out of the Sea, of as clear brightneſs as the Moon: which way of drawing it belongs not to this place to ſhew: only thus much is hinted, that out of Nitre may be drawn an Univerſal Menſtruum, which is more excellent than the Corroſive Spirit of Nitre, which ſaid Spirit doth indeed diſſolve all things, but after the manner of corroſives, whereas this which ♄ draws and is of the clear brightneſs of the Moon, hath nothing of Corroſivity in it, but is mild and ſweet, and wets not the hands, or tingeth them, as that Corroſive doth; and altho' ſuch a water be Volatile, and not fixt, yet is it of ſuch a nature as to conſtringe, and fix other fugitive, and unfixt things. 'Tis a thing moſt worthy of admiration to conſider how thoſe Natures have a mutual love each to the other, and embrace one another, and are converted the one into the other. And thus much may ſuffice to have been ſpoken concerning the precipitation of the Metals out of both the dry, and moiſt ſolutions.

Let no body ſeek to fiſh ought more out of me by their Letters; but as for ſuch as formerly have been my friends, and even now are, or ſhall hereafter be, to theſe I will not deny any thing, always provided, that nothing be done againſt a *decorum* (as they uſe to ſay) or a diſcreet behaviour.

But now if any one thinks that (if he comes flying from the Eaſt or Weſt) I muſt preſently lay aſide all my buſineſs, and only attend upon doing and anſwering what he demands: No, that's a thing my Affairs won't permit me to do, for I have ſomewhat elſe to manage. And therefore would

would Iforewarn such an one,that he enters not on such a Journey afore he be certain whether or no it stands with my convenience or not. For this hath many a time already happened unto me,*viz.* for some one to come with a desire of knowing this or that secret, who (when I would have told it him, but that I had no time then to accommodate him) hath gone away stomaching at me, and began to reproach me publickly afore allMen,as if I were some inhumane,or mercilesse fellow,and would not satisfy his requeste. Some also there have been, who out ofthe meer malice of their mind have divulged,that I my self have nothing, seeing they can get nothing from me; there are many such perverse kind of men to be found, who make no Conscience of enervating, or sucking out the very Marrow of the Bones of others,so as they may be but benefited thereby themselves;which verily is a great evil and inhumanity. How often have such kind of men come unto me, whom, (when they have spoken with their kind words unto me, and also carry the garb, and outside show of very honest Men, and promised all decent thankfulness) I have satisfy'd, and yet have afterwards fled off from, and broken their Faith: Therefore it is the best way for him who has any singular thing, to bury it over in silence, and so he need not fear of being drained by others, that know how (by the perswasive flattering Art) to get out his skill, and give no thanks afterwards for the same.

If I had not already began to describe the *Prosperity of Germany*,certainly I would not now begin; but forasmuch as I have taken upon me to finish what I have begun, I will stand to my promise, and will in like manner shortly publish (if God shall see it good) the third and fourth part.

And seeing that in both the following parts,the melioration, or concentration of the Metals, is chiefly to be done by the help of Salt-petre, I was willing more amply to confirm in this second part, that which I wrote in the first part of the Generation of Salt-petre. And I do again and again averr with the greatest asseveration, that such a generation of Salt-petre out of wood is very true, and is founded on Nature her self.

Now must I proceed a little onwards, and withal demonstrate to the simple, that the putrefactory Stomack, in which the wood is digested and putrefied, and which transmuteth all wood,and resolves likewise all Leaves and Grass in a short time, transmutes and reduceth it into Dung, is as the stomack of Animals is, and this may be done in a most vast Quantity, as hath been proved in the first part of the *Prosperity of Germany*; and this no Mortal Man can ever refute, *viz.* that the essential salt, or salt of Nature,is no other thing but Salt-petre, but is not as yet burning,or flaming up,until it be animated by the air,and conceive a life thencefrom,the essential salt of Vegetables, barely such, is not so, *viz.* Salt-petre, as hath been sufficiently manifested.

Now whatsoever gives fertility and power of growth, is Nitrous; if therefore there lay hid no Nitre in Minerals,as in stones, why would the Gardiners carry slackt Lime into their Fields,and use it instead of Dung to dung their Fields withal? Whence doth the Salt-petre come that grows on upon old Walls, if not from the Lime? What is the reason that the Salt-petre men do seek after old ruined walls, to make Salt-petre thereout of,were nothing in them? I verily believe that this is an indubitable Argument, that there is Salt-petre hidden in all things: For the salt of the World, or the Universal Essential salt, is nothing else but Salt-petre, when it hath after a due time attracted a life out of the air, to which end my secret circulatoryinstrument was invented, that such an animation might be the more conveniently brought to pass.

Nor do the other kinds of salts, *viz.* Sal-Gem, the salt made out of the natural salt fountains,or sea-salt, likewise all salts which are made out of the Lees of Wood ashes,or of Lime,also Alume and Vitriol,all these are not so widely different from salt-petre, but they may easily be transmuted,and converted into salt-petre by the animation of the air,by the help of my circulatory vessel; but for the better perception of the operation, I will subjoin this Example.

Dissolve as much Sal-Gem, sea salt, or salt made out of the salt fountains,or common salt which is frequently used in boiling of meats,or salt made of Wood ashes, or of the stones of Calx-vive, in Aq. fortis, as much as the water will assume to its self, or be able to dissolve, and let it again cool; then the salt does not concrete or shoot granularly,any more but into longish Cones like salt-petre.Pour off the Aq.fortis,or Salt-petre water, and dissolve it, *viz.* the salt, again in a Lixivium of Lime, and crystallize it, so shall you have therefrom a Natural, or Genuine Salt-petre,and no less combustible than any other Salt-petre that is digged out of the stables where Cattle have stood. Then again may there be, by the said Salt-petre water, more salt prepared, either common salt, or salt out of Herbs,or Wood, and be dissolved and crystallized, from whence results a new salt-petre, and this operation may be so long repeated,until all the salt-petre water be turned together with the salt, into salt-petre.

This transmutation of salt-petre is perfected in some hours, and from hence may a worthy reward for your pains be reaped, could it be otherwise performed than in Glasses; and indeed,out of one pound of salt-petre, would there come an hundred pounds of petre, if a part of the transmuted salt be still distilled anew into water, and more new salt be by it again transmuted. But there is no such need of setting about a work so laborious, seeing there is at hand a far speedier, or more dexterous way of doing the same, if *viz.* those salts shall be animated by the air, by the circulation that I have contrived, and so be turned into salt-petre in great quantity: which animation, or hatching as 'twere,may be done in vast quantity by easie labour, and little costs, the air (as we use to say) turning or making both sides of the Leaf: For one portion continually kindles and animates another, no otherwise than as a little Leaven doth a greatMass of Dough,and as a little Fœces, or Yeast, yea, as little as will lie in a Spoon, serves to ferment a whole Vessel of Ale; the same is done here. And indeed, common salt-petre may be implanted into other salts, even as a Vegetable Seed is sown in the Earth, so as thence to get in a short space of time a great encrease, even an hundred, or a thousand-fold.

But the sluggish Companions who had rather fatten themselves with eating,drinking, and sleeping,and wholly give themselves to laziness, who is able to wait so long in the expectation of this thing? Alass for ye, ye sloathful, lazy, and devouring Gluttons,with what face dare ye so manifestly to betray your laziness? I pray, if you put out your Money to Use,and have 5 or 6 *per C.* as we use to say, a Year, must you not expect the years revolution afore ye receive it? And besides, you run here a hazard too, least your Debtor breaks, and defraud you of the very Principal it self: If you lay out your Moneys on building Houses, so to make a great gain thereby, may not your Tenant be reduced to such wants as not to have wherewithal to pay you, unless haply, out of the very Stubble, or Litter of his poverty? May not your Ships which float about in the Sea, be cast away by Storms and Tempests, or be taken by Pirates? Why are ye not as Patient in your expectation as the Husbandman is, who after he hath sown his Grain, must wait a whole year afore he reaps with advantage what he hath sown. Nay, yet more, if he be pretty fortunate, he scarce gains 6 in the 100, the costs and pains being reckoned; and in the mean time he is in fear, lest the Corn should be blited by the cold, or being near ripe, should by a bad season be spoiled and corrupted in the field.If there happens a year that is droughty,then the Corn cannot grow up high, or 'tis eaten by the Mice; but now in the preparation of Salt-petre all those Cares are saved, and 100 Dollars may yearly yield thee 2, 3, 4, or more gains, and that without any wronging thy Conscience, and without endamaging any other, and without Extortion; for if thou hast much Salt-petre, thou maist promise thy self much gold and silver also, for there will alwaies be such as buy it up; and if thou attentively heedest,thou hast so much delivered thee in my Writings, as

that

that thou thy ſelf maiſt ſpend it all on the melioration and ſeparation of Metals: Nor needeſt thou, if thou thinkeſt it good, ſell any of the ſame. Nor is there any reaſon that thou ſhould be aſham'd or repent of ſuch a Work, becauſe one man is ſufficient, without any others help, to manage the greateſt operation: nor need there great expence, ſave only a little to build a ſmall Cottage, wherein the Salt-petre may be kept dry. If you have huge Woods at hand, you may make your Salt-petre out of wood; if you want wood, then out of the dung of Horſes, Oxen, or other Beaſts, and Sheep, or elſe out of even common Salt, which we uſe in ſeaſoning our Meats, out of wood-aſhes, and out of Lime: Whatever it be prepared from, it will not coſt much, for 1 *l.* of Salt will yield thee 1 *l.* of Salt-petre.

But haply ſome or other may be in the mind to think or demand, why *Glauber* himſelf ſets not about this work, and reſerve the whole Gain to himſelf? To theſe I anſwer, that I am not of ſuch a greedy deſire, as to wiſh for all to my ſelf; nor will it at all be unacceptable to me, if another hath likewiſe ſomewhat; nor will it be at all leſs lawful for me to do for my ſelf ſo much as ſeemeth me good, as for any other to take his liberty, and to do to himſelf as ſeemeth him good. Beſides too, I am not of the mind to make the thing ſo very common, but will ſee whom I communicate ought unto, that ſo it may be applied to good uſes, and not come into the hands of the Unworthy.

The firſt ten years however Salt-petre will not be of ſo vile a price, but that it may be made and ſold to profit; Who knows whether or no he ſhall live ſo long? And if at the utmoſt it ſhould after 20 or 30 years be of ſo mean a price, becauſe of this Invention of mine, yet in the interim they may all that while enjoy the profit of the ſame; and it may be expected from the hands of God, that He will, for the time to come, provide for them ſome other waies: But never will it be ſo vile, as to be worth nothing; and if it were ſo, that you could not make any Money of it, (tho' it is impoſſible that it ſhould ever be ſuch a drug) yet (by that manuduction which I have afore given in the 1, 2, and 4*th.* Parts of my *Furnaces*; as alſo in *The Explication of Miraculum Mundi*; in the 2*d.* & 3*d.* Part of my *Pharmac. Spagyr.* and in This Second, and ſhall be in the following Third and Fourth Parts of the *Proſperity of Germany*;) it may be improved about many eminent uſes, and ſo Gain be thereof made; for Salt-petre is ſuch a Subject, as you can never have too much of, and is therefore worth our labouring after, and our endeavouring how to prepare it in good quantity, and withal, of finding out what benefit it is naturally able to afford us; for it is even a wonder to conſider how great things may be done by the help thereof: It is the greateſt Poiſon and yet may a moſt excellent Medicine be thereoutof prepared: Colder it is than Ice, and yet hotter than any fire. It is the Generator of all things, and alſo their Corrupter; it vivifies and kills all things; it is heavier than gold, and yet lighter than the Wind; it is alſo Fire and Water, Air and Earth, Male and Female; it impregnateth and ſuffereth it ſelf to be impregnated; it is light, and is alſo darkneſs; it is black and white: There are in it as many Colours as the world affords; it is fixt and volatile, corporeal and ſpiritual; it kindles and burns all things, and doth alſo quench all burnings; it is the Beginning of all things, and yet it cauſeth the End of all things; that which is ſoft, it makes to be congealed and become ſtiff; and again, that which is ſtiff or hard, it makes ſoft.

O Thou Creator of all things, How great a vaſtneſs is there of thy wonderful Works? and what a fewneſs is there of thoſe who underſtand, or know, or labour to know it! O thou eternal Light! illuminate the dark breaſts of the loſt Sons of the World; O thou viviſying fire, mollifie, enkindle, heat the ſtubborn hearts of ſluggiſh Mankind, that are oppreſſed with ſleep, and frozen with cold, that ſo they may ſeek thee, and know thee, and learn to fear thee in true Humility, and to honour & worſhip thee without Hypocriſie. *Amen.*

An Admonition, and ſhort Repetition of thoſe things which are treated of in this Treatiſe.

THat the Friendly Reader may make this Book yet of more uſe and benefit to himſelf, I thought it worth while by way of an Overplus, again to ſet here afore his eyes thoſe Secrets which have been herein mentioned, what 'tis that the uſe of them doth conſiſt properly in.

Firſt of all, it hath been ſhown, how by the means of Salt-petre, all Volatile, and immature Minerals are to be brought to a ripeneſs both in the moiſt way and in the dry way, that ſo they may yield forth out of themſelves in the melting, good durable Gold and Silver. Then I taught by what way the Volatile, Arſenical, Coboltick, and Antimonial, Auriferous, and Argentiferous Minerals, may by an eaſy labour, be by an artificial fuſion, and extraction, and alſo by a precipitation into Regulus's, and by the purification or cupellation of the ſaid Regulus's, by the help of Salt-petre, converted or brought into uſe in the dry way, and the Gold and Silver hidden in them be drawn forth. Thirdly, I have ſhown the extraction of Gold and Silver out of all the barren, or poorer ſort of Minera's or Ores, which are not worth the charges of excocting, or the uſual way of proceeding, and of the drawing them out by a ſingular Art, with the water of Salt-petre, and of rightly working them; which way is to be preferred far afore any uſual excoction of thoſe poorer kinds of Minera's, not only becauſe ſuch an extraction is performed without a melting fire, and a Furnace; but alſo, becauſe in this extraction there is more obtained than is by excoction or forcing out: And yet farther, that which was Volatile in them is fixed together, and retained, by that Water of Salt-petre which would otherwiſe in a melting Fire fly away in fume. And more than this too, Gold and Silver may by this moiſt way and that with very eaſie Labour be extracted and in a due manner perfected, and that commodiouſly and with no ſmall profit, out of any, the vileſt Foſſiles (or things dig'd out of the Earth) as out of diſeſteemed Earths, Duſts, Sands, and Flints, from whence, otherwiſe you cannot extract any thing neither by Excoction nor by Mercury: So that in all places of the World what coaſt ſoever, ſo it be ſomewhat a dryiſh ſoil, is to be found ſuch kind of Earth, Clay (or Marle) Sand, Flints, and ſuch like which contain in them a thin or ſparing kind of Gold and Silver, and from which they may profitably be extracted. Verily it is a dainty Art which may be uſed in all parts of the World, nor is it at all burdenſom to carry, but may be excellently (well, or ſafely) preſerved till need requiers. But this is to be noted that the latter Earth or Clay muſt firſt be made red hot and burnt afore it be moiſtned with the Water of Salt-petre. For without ſo doing, the Earth would always remain thick (or clammy,) would drink up much water, and it would not eaſily be ſeparated, but being burned, it ſuffers it ſelf to be extracted no other than as if it were Sand. So neither do the Ore or Foſſiles of Iron which are auriferous and abound with Iron, ſuffer the Gold to be extracted and precipitated out of them as readily as other Minera's or Ores do. But the Iron, (if there be overmuch of it) makes the Water thick and pappy like Mud. And therefore you muſt put into that ſolution a part of common Water, to make it the thinner, that ſo the Gold and Silver may be the eaſilier precipitated thencefrom. The auriferous Coppery Ores are to be burnt firſt, if they are ſulphureous, if not, they may then be extracted, though not burnt. The ſandy, ſtony, brittle, and pebbliſh, Foſſiles need no other preparation but to be burnt and ground.

Likewiſe all auriferous Irony, or Coppery Ores, may be ſeparated by common ſalt, without a Furnace, or melting fire, and that in the open air (as we ſaid afore where we treated of the poorer Coppery Minera's, or Ores:) and many hundreds of pounds may be done at one time, and with one labour, and the Gold which is extracted mixtly with the Iron and Copper, may be ſeparated out of the ſolution, by the moiſt precipitating way there delivered, and that with a mighty profit and gain, becauſe that ſame precipitation hurts not in the leaſt either the Copper, or the Iron, as to their malleability.

In like manner may you precipitate the Gold out of any Vitriol water, and that in quantity (when it has any in it): and on ſuch wiſe too, that the precipitation of the Vitriol ſhall not at all change ought of its nature; and this is ſo compendious a way, as that if there were contained no more than one quarter of a Drachm of Gold in 100 *l.* *of Vitriol, yet would not that precipitation be of no uſe or profit. And on this wiſe and manner may all other Mineral waters be precipitated.*

Moreover, as concerning the means of eaſily preparing the ſalt ſo as to ſerve for the extracting the Copper, in all Countries, but eſpecially on the Sea Coaſts, the Concentration of ſalt out of the waters, or the Sea will afford you no mean, or obſcure Documents touching that thing; which contration it treated of in the Book Intituled, The Conſolation of Navigators.

But foraſmuch as there is mention made in this Treatiſe of a yet other certain Artificial ſeparation of Gold and Silver out of the imperfect Metals, in which, Antimonial ſcoria have place, in a forenamed extraction, which I would willingly (but as yet have not) delivered; let no body ſo conſtrue it, as if I either purpoſely, or careleſly omitted the ſame: No! The Caſe is far otherwiſe, and this is the true reaſon; ſeeing this Book now in hand is become more prolix than I intended, I determined with my ſelf to reſerve that moſt profitable proceſs for the following third part, which God willing, I will very ſhortly publiſh, till then, I entreat the Friendly Reader to expect or wait for it with a good and patient mind.

Mean while he may acquieſce with theſe two ways, viz. *the dry and the moiſt, and delight himſelf herein, and withal take care (as far as in him lies) to have ready by him, ſome quantity of Salt-petre; for the following third part ſhall treat of nothing elſe but the performing and doing of proceſſes by the help of Salt-petre. He therefore that knows how to make it in plenty at a ſmall rate, may hope for ſo much the greater benefit; and this I judged expedient, to add here for admonitions ſake. More ſhall be diſcovered (God willing) in the third and fourth following parts.*

THE

Prosp. Germ. 4. p. Pag. 76.
Lat. Pag. 73.

A. Ein Kleiner Zinßbaur mit einem Pflug. B. Ein Zinßbaur mit 3. Pflüge. C. Deß Zinßbauren Huet. D. Deß Zinßbauren 3. Pflüge. E. Die Register dardurch daß Feür regiret wirt. F. Daß eingesetzte Glaß mit seinem Helm vnd Recipienten. G. Die Thüer zu dem Röster, H. Daß Aschenloch. I. Ein Körblein mit Kohlen.

Part I. before Pag. 337.

Prosp. Germ. 3. p. Pag. 156.
Lat. Pag. 150.

☉☽ vnd ♂ mit ♃ Jagen,
♄ mus die Garne tragen,
Stelt ☿ recht nach dem Windt,
So wird gefangen Fraw ♀ Kindt.

THE

THIRD PART

OF THE

Prosperity of Germany.

In which is Delivered,

The way of most easily and plentifully extracting *Salt-petre* out of Various Subjects every where Obvious and at Hand.

TOGETHER

With a succinct Explication of *Paracelsus* his Prophecy; that is to say, in what manner it is to be understood the *Northren Lion* will Institute or Plant his political or civil Monarchy; and that *Paracelsus* himself will not abide in his Grave; and that a vast quantity of Riches will offer it self.

LIKEWISE

What an one that Artist *Elias* is, of whose coming in the last Days, and his discloſing abundance of Secrets, *Paracelsus* and others have predicted.

To the READER.

Friendly Reader,

Although there are very many Causes that might dissuade me from Publishing this Third and the Fourth following Part of the Prosperity of Germany *in Print, (because of the inconveniencies and hurt done me by the perfidious* Farnner, *against whom no body hath hitherto opposed himself; but all have connived and wink'd thereat; and consequently have every one left such a perfidious Treachery unpunish'd) and incourage me to leave* Germany, *a most ungrateful* Germany *as it is. Yet notwithstanding, the Love to my Neighbours (amongst whom there are many honest and good Men to be found, who lead a troublesome kind of Life to get their daily food) hath compelled me. To such therefore as these are, would I willingly give [or hand forth] a Torch [so to direct them] that they may for time to come fare better and more easily get things necessary to uphold Life withal; but yet after such wise, as that they set their Hands to the Work, for the Gods sell not ought to those that Labour not, but all good things are sought, and found out by daily Labour and diligent search.*

Now albeit, that all those things which are throughly handled in this book are true, and so confirmed by experience as that any one may easily understand and imitate them, yet notwithstanding, I am certain that there will be a very many who by reason of their ignorance, cannot understand them, and apply them to use; because the greatest part of mankind are too much addicted to lazines, and do for the most part refuse to apply their Limbs to work, but would rather walk abroad, and discourse of Arts when they are in their cups.

I say that these secrets of mine will no ways profit such kind of Men, for such must first learn in what manner the [necessary] Instruments are to be handled, and how the Operations are to be rightly instituted and managed in seemly Order.

There are abundance of Men who (if they hap to read some Chymical Writings, or hear others talk of the profitableness of them, (they) are presently inflamed with such a love, that they will even wholly devote themselves to Chymistry on the hopes of growing rich. And now when they have proposed any thing to themselves, and attempt to do it, if they hap to have a sparkle of Fire light on their hands, or that by reason of some other obstacle, all things do not immediately fadge to their minds, they throw away the Tongs, and the Crucibles upon the Ground, and detest (or curse) the Author, because he hath not Written clear enough, and that they do not presently extract great store of Gold.

Let not such as these at all perswade themselves that they can receive any instruction from these my Writings; for my Writings require Men that are diligent, whose minds are never wearied with labour, and who are not sloathful, and impatient of Labour. Now to the studious (searchers) and especially to such Children (or Disciples) adopted or chosen by God, all these things will be unto them clear, manifestly evident, and easie to be imitated.

Forasmuch therefore as I have spoken many things in the First and Second Part of the Prosperity of Germany, *concerning the making and use of Nitre, I do now go on in God's Name, and do teach in this third part, by what easie ways Nitre may be variously made, and be fruitfully and profitably used both by Noble Men and common Men; so that there is not a man in the whole World, but may (if he please) get great benefit thereby.*

The Omnipotent God, the Author and giver of every good thing, bestow upon us to be able to enjoy and make use of his Gifts, that all things may tend to the Honour of his most Holy Name, and to the Safety and Preservation of us all. Amen

Of the Preparation of SALT-PETRE.

I Shewed in the First Part of the *Prosperity of Germany*, the way whereby Wood may be concentrated and turned into excellent Nitre, and which otherwise is every where for the most part consumed by lying rotting in the Woods, and yields no benefit at all unto any Man.

This Operation is to be done with the help of a certain Press artificially contrived for that particular business, the due (or right) description of which, we gave you in the *Continuation of Miraculum Mundi*. But the circulatory Vessels by which the Lixivium of the wood (or the distilled Liquor out of the wood) is to be excited and heated by the Air, have not as yet been described; and therefore we have determined to do it in this Third Part. This Figure therefore represents them, and its use; and is as follows.

There must be two Boxes (as 'twere) made of Boards, each of them of like bigness and capacity, as the Figure (or Letter) A shews. These Boxes are to be so placed, that a Vessel may be set under one end of each Box, to receive in it (if need be) the Lixivium poured into them: Let one of the Boxes or Vessels be filled top full of Horse-dung, Hens or Pigeons-dung; or else with the Leaves of the Trees, amongst which Fir-tree Leaves are best; then pour thereupon so much of this Lixivium which we shall make a description of by and by, so much as may suffice to moisten the Dung or Leaves contained in the Box or Vessel, and a little to over-top it. The next day (after you have so done) when you judge that all the matter is throughly wetted, let the Lixivium run out by a Tap, the which said Lixivium you must pour into the other Box filled with the like matters, and which stands just against it. Let these things stand thus wetted for some days; In the mean time, the matter contained in the first Box, grows hot, and the useless moisture being most plentifully resolved into Vapours out of the Lixivium, the said matter doth daily get more and more efficacy. As long as you observe the heat of this Box to continue, and the evaporation of moisture to last, so long must it be left in the same positure whereby the Lixivium, thus poured on, may by its notable power consume and dissolve the Dung, or the other matters contained in the Box, and turn them into Water. And here you are to observe this direction. You must always put in new matter instead of that which is turned into Liquor, and so one Box may be always at all times kept full of the matters. But now when your materials being put in the first Box, begin to cool, the Lixivium which now lies in the second Box or Vessel, must be poured upon the matters yet warm, in the first Box, that so it may again contract a heat thence-from by little and little, and so may dissolve those matters. And now whilst these things are thus detained in the first Box or Vessel, the materials that are in like manner put in the second Box do heat each other, and the unprofitable Phlegm evaporateth: Now as long as this second Box vaporateth, the Lixivium must not be drawn out of the first Box and be poured thereinto, but all the matters are to be left to heat or burn (as it were) themselves. And when you perceive that the materials cool, then the Lixivium must be drawn off from the matters in the first Box, and be poured upon them in the second Box; and hereby the matters contained in the first Box will again wax hot, be burnt, and be turned into Liquor. By how much the oftner and longer this repeated pouring on of Lixivium is done, so much the more, and sooner are the materials consumed; from which matters thus consumed, a most excellent Salt-petre may afterwards be made, for the heat makes the matters rot. Now then to make trial (if it be well enough done) take some of this Lixivium boil it away to a sufficient height for Chrystallization, set it in a cold place to shoot, dry the salt you find, being dry, put it on a live Coal, which if you find it burn up, it is a sign that it is full time to draw off, and take all your Lixivium to the intent that Salt-petre may be thereof made by due evaporation and coagulation. But if you chance to find it otherwise, and that the salt does not flame up, the Lixivium must lie longer in the Boxes to be heated and animated by the Air which is magnetically attracted by means of the heat: This labour being rightly ordered, there may be made excellent Salt-petre out of the said matters by the help of a convenient Lixivium, in ten or twelve Months space without any costs, save some small trifle about the Lixivium; neither is the Work so grievous or troublesome, for there is nothing more required but that the Lixivium be several times poured out of one Box into the other.

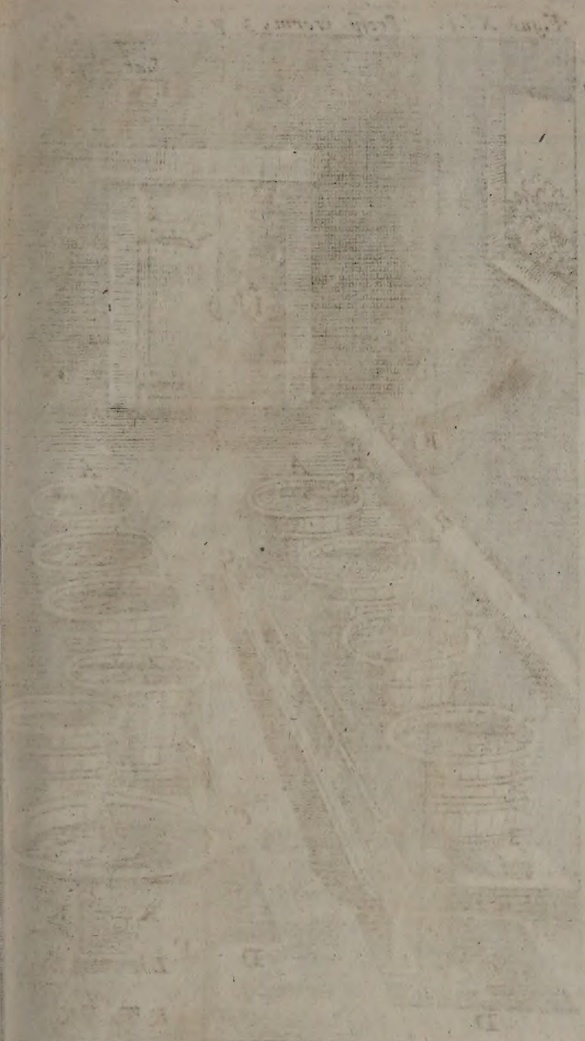
NB. There are yet, besides the other aforenamed several sorts of matters that offer themselves, out of which, Salt-petre may be made by the help of the Boxes, & a due Lixivium far speedilier & plentifullier; but I judge it not needful to divulge every thing: Likewise there may be made a convenient Lixivium to prepare Salt-petre sooner, by and after another manner, to wit, in a dry form, without such putrifying as is done in the Boxes or Circulatories; but even this Artifice too, will I reserve yet a little longer for my Friends.

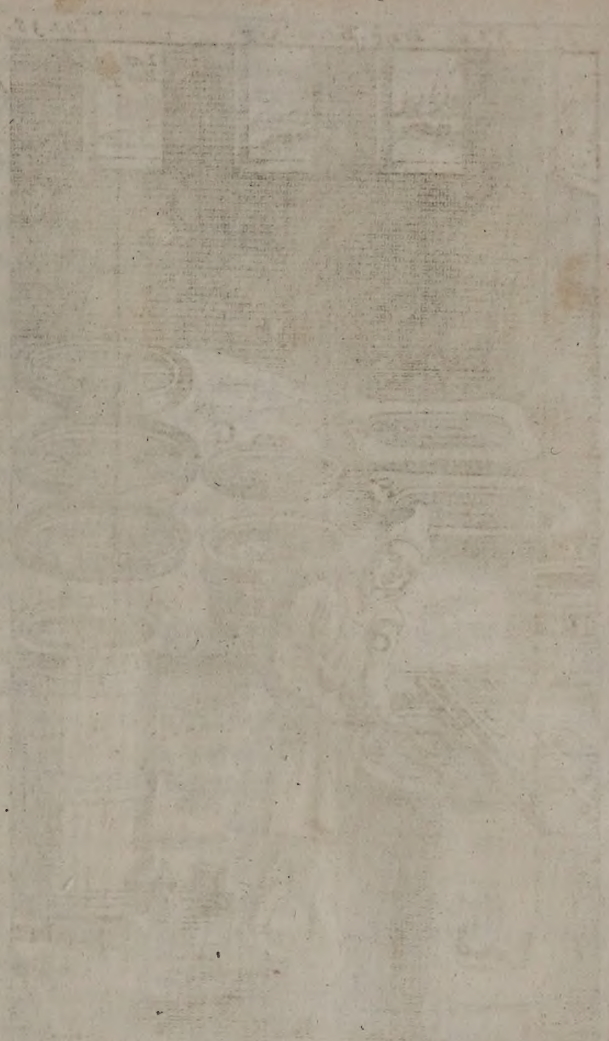
Nay yet more, there may be (by a yet secreter and shorter method) excellent Salt-petre extracted by the means of such a Lixivium in three hours space, and that with most great profit: And this way of preparing Salt-petre, I do preferr before all the others, and have found it the most excellent (Petre) of them all.

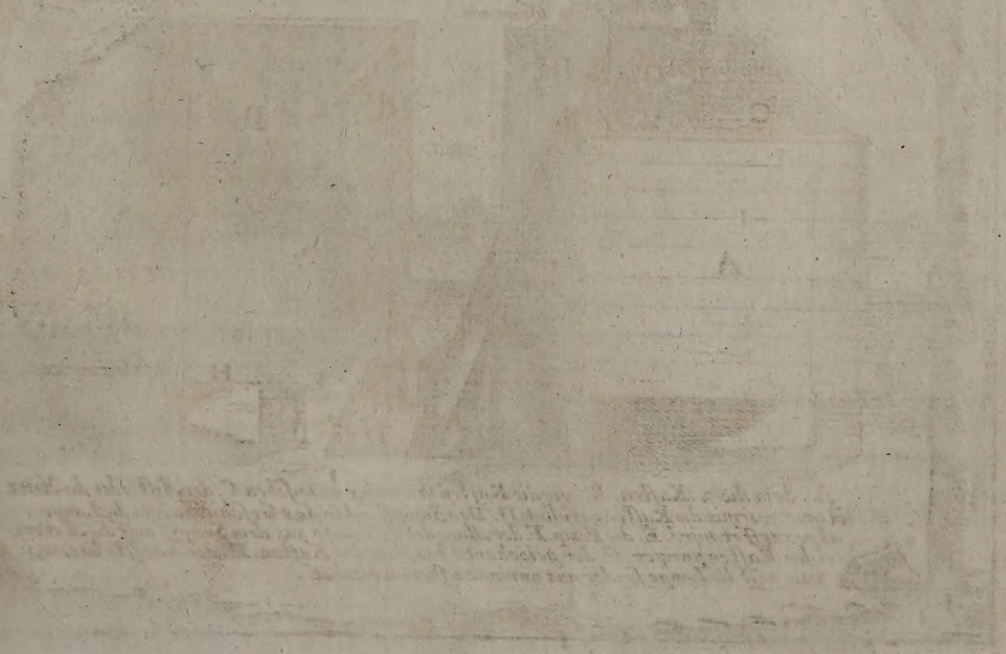
The Lixivium *is on this wise made.*

MAke you a strong Lixivium of Wood-ashes, and when you burn the unprofitable Wood in the Woods into ashes, make by the same labour of your Fire some good Lime of stones fit for such a purpose; Then quench this Calx or Lime with Water, that so it may fall into powder, then pour thereon as much of the Lee of the Wood-ashes now spoken off, as is sufficient, mixt it with a wooden *Spatula*, and repeat this mixing and stirring it very often, some days following, that so the Lee may be made the stronger by reason of the Lime, and be like Fire, the which has an excellent virtue to putrefy the vegetables and animals, and to turn them into burning Salt-petre. (See the foregoing Figure belonging to this Operation noted at the top page, 1.)

Here



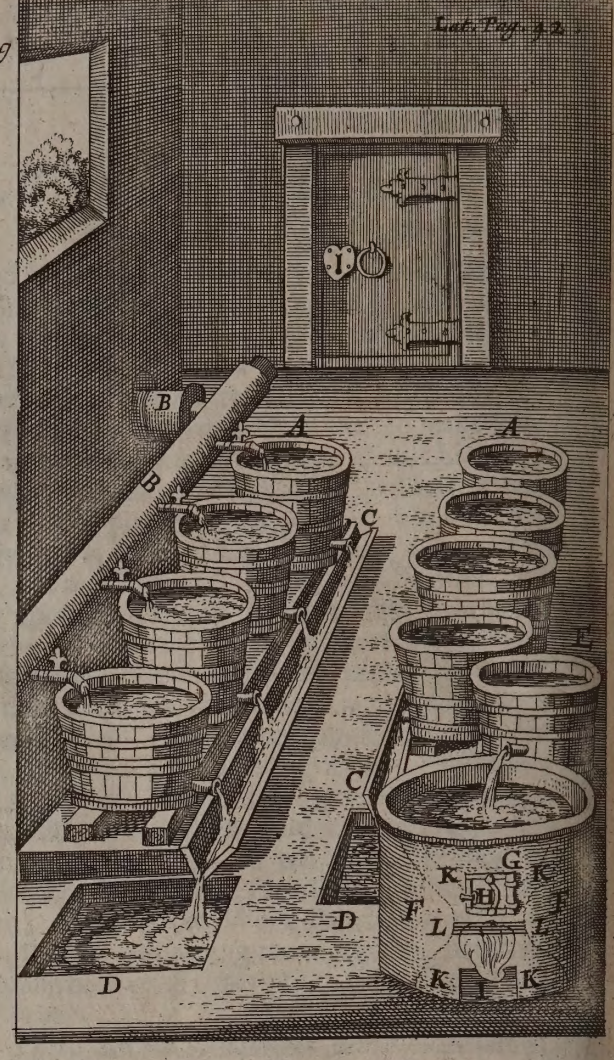




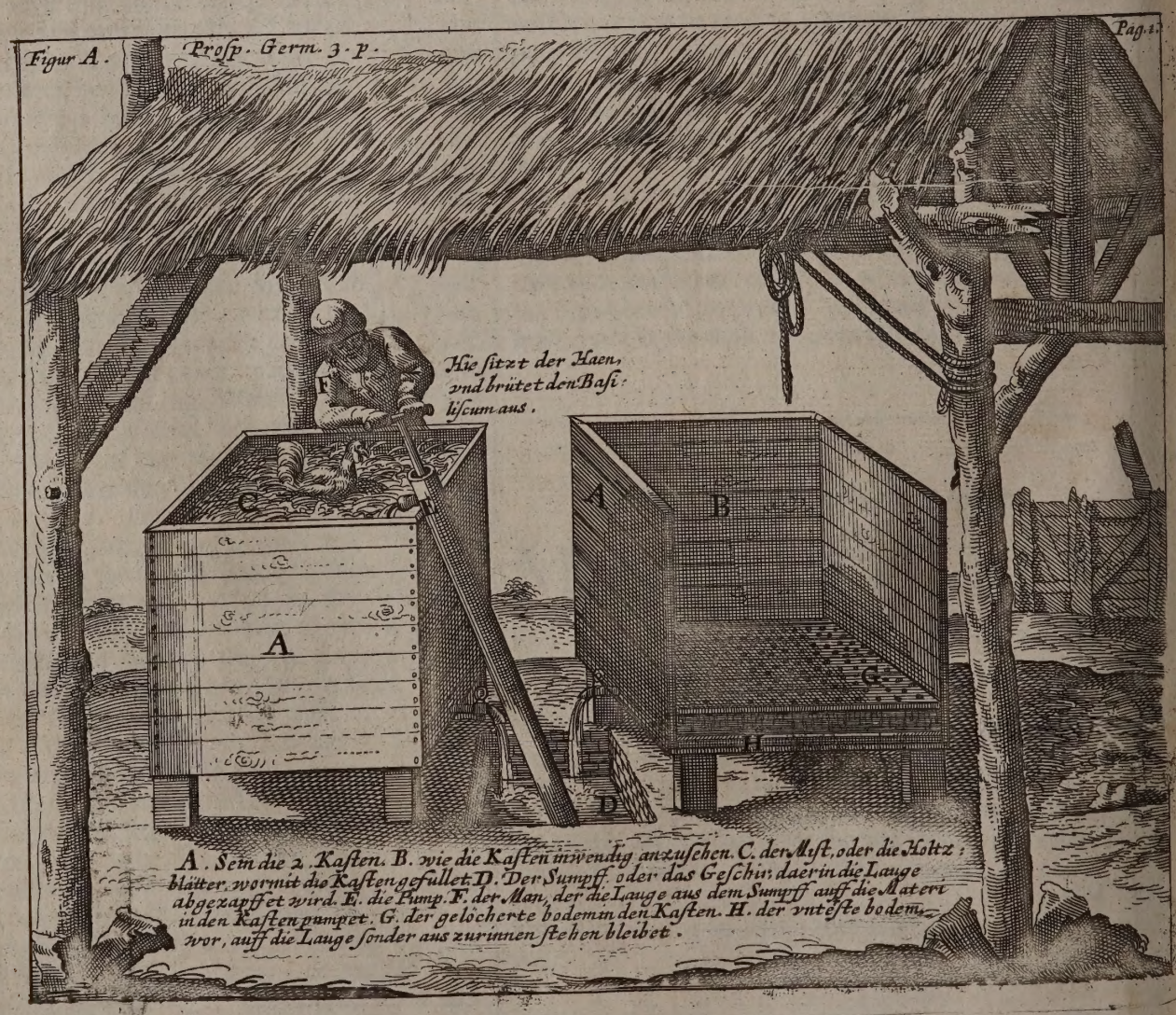
Figur N.o 2. Prosp. Germ. 3. p. Pag. 38.

Part I. before Pag. 339

Figur N.o 1. Prosp. Germ. 3. p. Pag. 35.



Figur A. Prosp. Germ. 3. p. Pag. 1.



A. Sein die 2. Kasten. B. wie die Kasten inwendig anzusehen. C. der Mist, oder die Holtz-blätter, wormit die Kasten gefüllet. D. Der Sumpff, oder das Geschirr, daerin die Lauge abgezapffet wird. E. die Pump. F. der Man, der die Lauge aus dem Sumpff auff die Materi in den Kasten pumpet. G. der gelöcherte bodem in den Kasten. H. der vnterste bodem-wor, auff die Lauge sonder aus zurinnen stehen bleibet.

Here the Cock sits that hatches the Basilisk, by the top of the Chest.

A A *Are the two Chests.*
B *The appearance of the Chests within.*
C *The Horse-dung, or Leaves of Trees, wherewith the Chests are filled.*
D *The Cistern or Vessel to receive the Lixivium.*
E *The Pump.*
F *The Man that pumps the Lixivium out of the Cistern, upon the matter in the Chests.*
G *The Bottom of the Chests full of holes.*
H *The second or lowermost Bottom where the Lixivium is kept without running out.*

Another way of making Excellent Salt-petre in great Quantity out of Lime and the Lee of Wood.

TAKE the aforesaid Lime and Wood-ashes, of each as much as you will; and twice as much Horse-dung or Cows-dung, mix these matters exactly in a wooden Vessel or Tub, with Mans Urine or beasts Piss, and make it of the thickness as the thicker sort of Mortar that the *Masons* use, is wont to be of. You must have good store of this Paste made. Then make a certain arch of boards, which said arch must be some three, four, six or more feet broad, and deep or high, and the length of it must be double to that (or twice as much, as broad, and deep, or high) according to the conveniency of the place, and the quantity of Salt-petre you would make. The arch thus made, must be all over dawbed with the aforesaid mixture, the thickness of an hands breadth, just as we see Vaults, or Arches built up, of Stones and Lime upon wooden arches. Now when all is duly ordered, there must be put some Fire in under the vault of the arch, at first it must be very gentle, least the arch (of wood) as being the very foundation and supporter of the (other) arch should presently kindle and be burnt, which must not be, but be kept whole rather, untill the arch or covering thereon which is made of Lime, Ashes, and Dung, be perfectly dried. This done, there must be dawbed on, upon the said arch formerly made, more of the aforesaid prepared Calx, of about an hands-breadth thickness, and you will find that the humidity of this latter mass or second arching will be in a short time attracted by the first arch, and that this second pargetting will soon be dried: When this is done, there must be again the third time made another dawbing on, after the afore-prescribed manner. And this Operation is to be so long and so often repeated untill the arch be a foot or two in thickness, which when so, it is strong enough, nor needs it any more its wooden prop, and therefore now the Fire may be put thereto, and it may be burnt. And thus have you a vault or arch prepared, which is a most commodious instrument to make a quantity of Salt-petre by: And now if occasion require, and the condition of the place will permit, there may be built or made three or four arches after the same manner; though it be better to have them placed one by another, and to be of less magnitude or capaciousness; for so they are more convenient for Operation, as any one that practiseth hereabouts will easily apprehend and find.

Likewise it is better to build this arched Vault which we have called an Arch, long and narrow, than short and broad, because the Fire being put under one part of such a long Chimney-like Vault, will very well diffuse its heat to every place thereof, and so keep the arch continually hot.

When this Chimney like vault is wholly dry, it must be again moistned with Mans or Beasts Piss, that it may thence contract more new humidity, which we observe will easily be, seeing we know that it is made up of Horse or Cows-dung, and not barely of Lime, for then it would not so readily and easily receive the humidity, as when Dung is mixt with it; the wetted Chimney-arch must be dried by the force of Fire put thereunder, the which may also be a little augmented proportionable to the bigness and thickness of the vault or arch.

NB. You must take good heed, that the Fire you put under be not too much augmented, and so hurt your arches, but let it always be such as may suffice to dry your arch by little and little, or else the Dung will be burnt up, and the already generated Salt-petre will be spoiled, for the Fire can easily endamage the Petre.

But now when we shall have often thus moistned the said arches with Piss, and shall take notice that they (*viz.* the arches) do attract no more thereof (*viz.* of the Piss) as being already filled with the Salt of the Urine, the which may be done in some four or six Weeks time, there must be little bits broken off with an Iron Instrument in several places of the arch, and these bits must be powdered and be dissolved in Water so to make a Lixivium of it, be filtred, and after a due evaporation made, must be Chrystallized and dried; the dried Salt matter must be put upon the Fire to see if it will flame or not: If we shall find it thus to be and to burn like Salt-petre, we must break down all the arch, and by the help of a certain Mill, reduce it into powder very fine, and pour hot Water thereupon, to extract the Lixivium with, then evaporate it as much as is convenient, and set it by in a cool place to Chrystallize; this artifice of Boiling and Chrystalliſing shall be declared in proper Figures or Cuts in the end of this Work. But now if so be we perceive that the Salt extracted out of those little bits of the arch do not as yet flame up, 'tis a sign that it is not as yet sufficiently animated by the air: For the air gives life, which the Fire strongly attracteth, so that by the help of the Fire the air and life are attracted, whereby the Salt is animated and made inflammable. The Fire therefore here, is to be again administred (or put under) and the arched matter to be continually moistned with Rain water; and that Rain water is best, which (if it may be had) falls down when the Wind is in the North; though when there is no Rain water to be had, other water may be substituted in its stead. This pouring on of water is to be so long continued (always, permitting the Furnace or Arch to be rightly dried afore it be sprinkled with new water) untill the Salt, sticking in the arch, be found to be sufficiently animated by the benefit of the fire and air, and be inflammable when you make trial thereof by the aforesaid method.

This is a compendious way of making good Salt-petre in quantity enough, by only Lime, Wood-ashes, and Mans or Beasts Piss. If you proceed rightly on, you may get you a great quantity of Salt-petre in a most short space of time, and that for small costs, & in a manner no labour at all. The Lime and Ashes from whence the Petre is extracted, may be mixed again with new lime and new ashes, and other arched vaults be made thereof, upon which Urine must be continually poured

in

in like manner as we taught afore, that ſo they may be animated by the help of fire and air into Salt-petre. But if you have always at hand new Calx, or Lime and aſhes, it is better to make new arches, thereof in the place of thoſe you have pulled down, and to imploy the reſidue of that, out of which the Salt-petre hath been already extracted about dunging ſome barren Soil, eſpecially the moiſter ſort of Ground, becauſe it is impoſſible ſo thoroughly to ſeparate all the Salt that nothing abides behind in the reliques.

This way I communicate to all, but I reſerve for my Friends only the way by which, with the help of other Waters that coſt nothing, and may be had in every place, a far greater quantity of Salt-petre may in a yet ſhorter time be prepared by the ſaid arches, than is done by the help of Mans or Beaſts Urine. Nay more, there are ſome waters which in eight days time, we have obſerved to have been coagulated into burning Salt-petre, which ſecret verily may be practically improved with moſt notable benefit in all parts of the World that Men live in.

Beſides the ſubjects already mentioned, here offer themſelves to our Hands many others which are obvious to all, of which ſuch arches may be made, and which will yield more Salt-petre than the afore recited matters will; but let what has already been delivered, ſuffice. I cannot here forbear, but muſt tell you that there are ſome ſubjects to be found which (without the making the aforeſaid arches, though there lie notwithſtanding abundance of ſecrets therein) will bring a moſt notable benefit, and that belong not to this place, and which may be changed in three hours ſpace into excellent Petre; which labour (or operation) I keep for my Friends, and ſhould it be divulged, it would bring nothing but hurt, and therefore it is better to be ſilent: There ſhall more ſecrets be delivered in the following diſcourſe, where we ſpeak of the Northern Monarches.

Here follows another way of plentifully extracting Salt-petre *out of Rocks and Stones without Vegetables or Animals.*

TO the intent therefore that it may be ſufficiently evidenced, and that I may prove it to be true, that Salt-petre is an univerſal Salt or Subject, and is conſequently contained in all the things the World poſſeſſeth, I judge it a thing worth while to ſet down here ſome proofs or trials thereto accommodated.

It hath been ſufficiently enough already ſhown in the firſt part of the *Proſperity of Germany*, that good Salt-petre may by Art be extracted out of all the ſubjects of the World: But the way of ſo doing was not at all diſcloſed. For as much therefore as all Men do ſo greedily deſire it, I determined with my ſelf to deſcribe firſt of all, the Preſſes requiſite to the extraction of Salt-petre out of Wood, to the end that ſo it may evidently appear unto all Men, that it is a thing agreeable to nature, and that it is moſt eaſily accompliſhable, to preſs a juice out of any Wood, which may be turned by the air into good Salt-petre. But as for the circulatory Veſſels, I was not willing (then) to communicate them, but rather kept them a little longer for my Friends, which ſaid Veſſels I have notwithſtanding ſet down in this Third Part.

Likewiſe it ſeemed not expedient unto me to reveal unto ſuch as are enemies, the transformation (or changing) of Animals, much leſs of Minerals into Salt-petre. Yet however I have done ſo much by my Manuduction, as for any wiſe Men eaſily to underſtand the ſame by what hath been exhibited, and I have in ſome ſort opened it, that ſuch things are poſſible to be done. But I have not ſo clearly ſhown the way of effecting the ſame, leaſt I ſhould take away the occaſion of other Mens exerciſing their ingenuity in bethinking themſelves how it is to be done: Otherwiſe, it is not prohibited any one to ſeek a fuller information, from thoſe that have knowledge in theſe affairs.

Therefore foraſmuch as the way of extracting Salt-petre out of Stones, is look'd on as a moſt impoſſible thing by ſuch as are not skill'd in this Art, I have determined to deſcribe the ſame, for the ſake and benefit of ſuch as ſucceed us; The knack of this Artifice conſiſteth more in the knowing of the Stones, than in the extracting of the Salt-petre out of them, for the extraction is not any other way to be done, than as the making of their Lee out of the common Nitrous Earth is wont to be, concerning which thing, *Lazarus Ercker* hath written at large. The knowledge therefore of the Stones, and the preparation of them whereby they may communicate (or let go) their Nitre unto Water, is the principal thing, and without that, there cannot be any thing done in this Operation.

Firſt of all therefore 'tis neceſſary that the lover of Chymiſtry knows, that there are various Stones to be found that yield Salt-petre, *viz.* all ſuch Stones of which (being commonly calcined by the force of the fire) they make Lime for to build houſes withal. For there lies hidden in theſe kind of Stones, abundance of Salt-petre, which cannot be gotten out thence by the help of common Water by any kind of way or method: But when they are burnt with a violent Fire, they yield an hot Salt, extractable by the benefit of common water; which Salt indeed is not Salt-petre, but yet may moſt eaſily be turned by the air into Petre, like as it was formerly Salt-petre afore the Stone was burnt, and now firſt got another nature by the burning.

The truth of this thing, *viz.* That there reſides natural Salt-petre in all Stones, which may be burnt into Lime, may be proved on this wiſe following:

Take of theſe Stones which Lime may be made of, ℥ſs. or ℥j. powder it very fine, pour thereupon as much of the beſt *Aqua-fortis*: Place the Glaſs in which this matter is contained, in a warm place upon aſhes or ſand, that the ſtone may be diſſolved in the *Aqua-fortis*: After it hath thus ſtood for about one quarter of an hour, take out your Glaſs out of the aſhes or ſand, though the ſtone be not wholly diſſolved as yet, and pour thereon drop by drop, ſome Lixivium of wood, untill the ebullition of the Lee or Lixivium poured upon the diſſolved ſtone ceaſeth, and (the noiſe ceaſing) you ſhall perceive ſome kind of Salt produced from them thus commixt, *viz.* from the diſſolved ſtone and the Lixivium. Pour ſome common Water upon this Salt, ſo much as may ſerve to diſſolve the Salt in a warm place, the ſolution being made let the Liquor be filtred, or be ſtrained through ſome thin Linen cloth, that ſo the part of the ſtone undiſſolved, and the fæces may abide behind in the Filter or Linen cloth: The filtred Liquor muſt be coagulated into Salt by evaporating it away in a braſs Veſſel, then you are to weigh it: And now that we may exactly know, how much Salt-petre was in that ℥ſs. of the ſtone, you muſt proceed on farther thus:

Take the ſame quantity of *Aqua-fortis* as you uſed but now, about the ſolution of the Lime-ſtone, and pour thereon likewiſe the ſame quantity of Lixivium, that you

you used about the precipitation of the dissolved stone, and let there be made a precipitation, let the precipitated matter be coagulated into the substance of a salt, and then also weigh how much this quantity of salt is: and now, as much less weight, as you observe to be in this salt than in the first salt in which the Lime-stone is, so much Salt-petre was there in that half ounce of Lime-stone. This is a most certain trial, and by this means may we most easily find how many pounds of Salt-petre, are contained in an hundred weight of stones.

NB. To the end that the proof you make, may be most certain, we must use the lesser Centenary, or hundred weight, as being more usual, and more accommodate for the trying of Metals.

And albeit, that the using of Aqua-fortis to this Operation, is altogether without profit, where you would extract that salt in great plenty out of the stones, yet notwithstanding, it is not so slight or trivial a thing to know a certain way of trying what stones do most abound with Salt-petre, that so if we have a mind to extract Salt-petre out of them, we may take those, in which it lies in a plentiful manner.

Besides, those stones which do commonly yield a Calx or Lime by Calcination, and which the Bricklayers use; there are found other stones, out of which there cannot be made any Lime by Calcination, and yet nevertheless, abundance of Salt-petre may be thence extracted without any previous Calcination. He that delights himself in this work, must exactly know aforehand such kind of stones: Forasmuch as no body would easily perswade himself that Salt-petre is contained in them. Nor do I think that ever afore this time the way of extracting Salt-petre out of these kinds of stones was used; but whether there was no body that knew that there was such a Salt contained in them, or judged it a thing not to be regarded, this I know not. But this I know well enough that that way of extracting Salt-petre out of them was never observed and used in *Germany*, though there lies a most notable quantity of Petre in them, and easily extractable thence, did we but know the way.

Therefore, forasmuch as there is plenty enough of such stones in all places, and that Salt-petre may easilier be made of them, than of wood, I could not forbear, but must needs open and disclose this artifice for the good of the Country, and clearly explain it in this place.

Therefore, as concerning those stones which are here mentioned, there is such a plentiful store of them in most places, that they even make whole Mountains; they are in substance like a soft and tender stone, whitish in colour, [or of a shining colour] ashy colour'd or reddish, and are easily broken, and may be fashioned into all kind of shapes, or figures; and therefore they are frequently used about building Houses, for the making various Ornaments about the House, as for the corners of the Houses, the Doors, Windows, Steps or Stairs, or other External Ornaments. As long as they are yet in the Mountain, and not exposed to the air, they are of a considerable hardness enough, and do always hold it. When being used about Buildings, they are put in such places, where they may abide at all times dry, or else always moist.

But if so be they are one while dry, and another while moist, and are always obvious to the air [or weather] they easily become soft, and there scales off from them yearly, a little portion of the back of a Knifes thickness, like Meal, so that they are yearly lessen'd, and are not at all fit to build stable, or durable Houses with. The Stone-Cutters can easily distinguish these kind of stones from others, nor do they willingly use them where there is plenty of others to be had. And now, if you should go about to make your trial with these stones, like as you did with those that they make Lime of, according to the afore delivered Probation, so to know what quantity of Salt-petre is contained in them, it will not succeed so, because the Salt-petre becomes Volatile in the Calcination of it, and doth for the most part fly away into the air: and much less can you with [bare] water extract ought out of the Crude, and not Calcined stones; for such do not yield any Salt-petre at all, unless they have been placed in a moist air for about half a years space, whereby they may of themselves fall in pieces; for being so ordered, they easily yield forth their saltness to the water that is poured on them, and consequently yield plenty of Salt-petre. Of which thing, this is a most certain Testimony, if (*viz.*) such stones are laid in some dry place, whereto the Rain cannot come, and we do most frequently sprinkle them with common water, and they do thereby turn into a powder. And if it fall out otherwise, 'tis a sign that there is very little Salt-petre to be found in them, and that the labour you shall bestow about them will be in vain. But such stones as grow soft, and fall in pieces, in six or eight Months time, do promise notable Rewards for your Labour, *viz.* a great quantity of the wisht for salt; an hundred weight of these kind of stones thus fallen in pieces, will easily yield you ten pound of Salt-petre, more or less according to the Condition of the stone. The extracting of the Lee, or salt, is done with common water, in the same manner as the Lixivium is otherwise extracted out of that Earth which is digg'd up in the Stables where Beasts stand; which way of extracting Salt-petre, of coagulating and perfecting it, is clearly and perfectly enough described by *Lazarus Ercker*, heretofore the Emperours chief Overseer of the Metallick Affairs, in his most experienced Book of his Art of the proving of Metals; insomuch, that I esteem him to have rendred the hardest, or most difficult part, very clear, and therefore I will referr the well minded Reader thither.

But for as much as every one cannot buy himself a Book of such great bulk, only to get thereby the knowledge of the way of extracting and evaporating Salt-petre, I have judged it worth while to set down here for the sake of the Chymical Students, such directions as the aforesaid *Lazarus Ercker* hath delivered us hereabouts. For I was never of the mind to cast off such things as have been well delivered by other men; I only add unto them, those things that are mine: Let others do the like, that are the Authors of any new thing, that so there may arise some benefit thereby unto our Neighbours, for whose sake, that we may (*viz.*) serve them, the most great and blessed God hath bestowed on us such various knowledge.

But that we may get a certain knowledge of distinguishing the said stones, I think it altogether necessary to treat of them more at large.

Therefore although this kind of stones are plentifully enough, to be found every where in the World, yet they are not known, or regarded, because we cannot perswade our selves, that there is any the least portion of Salt-petre contained in them; for albeit, that an hundred pounds of such stone should contain in it ten pound of Salt-petre, and we should reduce the same into a most subtile powder, and should labour to

extract from thence a Lixivium or Lee, with either cold or hot water, yet ſhould we not hereby get ſo much as one Ounce of Salt-petre. The reaſon is this, becauſe there is not to be found in ſuch a ſtone as ſoon as ever it is digged out of the earth, any Corporal Salt-petre, which may be extracted by means of water, but there lies hidden only a certain Soul or Magnet of Salt-petre, by the virtue of which, that which gives a Corporeity thereunto is to be firſt attracted out of the air, to the end that Salt-petre may ariſe thencefrom. And this is hereby evident, for were it otherwiſe, and were there in that ſtone any Corporeal Petre at the firſt digging, it muſt neceſſarily be extracted thencefrom by the help of water; but we find it impoſſible to make any ſuch extraction, unleſs that ſtone be before laid for ſome certain time in the air, and doth, together with its ſoftneſs, acquire (or make) Salt-petre in a Magnetical manner.

But for all this, we know that this our reaſon ſo exceedingly well founded, will not yet ſatisfie the unskilful, unleſs we make it yet more clear unto them with other Expreſſions, and various Examples; but I pray how is it poſſible to declare all ſuch Circumſtances to one that is utterly ignorant. 'Tis too much labour to boil Meat for another, and to thruſt it into his Mouth too. It is ſurely ſufficient enough to have ſhown the truth, and diſcovered the way by which the operation is to be contrived, though all things be not founded on ſuch palpable Reaſons.

But foraſmuch, as the work, which I treat at preſent of, is an altogether new thing, and unknown to any men, the neceſſity of the thing requires, that we do a little more openly and clearly exhibit (and ſet down) the whole knack.

We preſuppoſe, that it is a thing well known already, even to all, that each thing hath in it its peculiar magnet, by the benefit of which, it attracteth unto it ſelf from the air, or earth, whatſoever is profitable for it; and eſpecially, becauſe we have largely treated thereof in our Works; inſomuch, that we deem it altogether needleſs to repeat the ſame here. However 'tis requiſite that I add thus much, *viz.* That the Minerals do abound with a certain Magnetick Virtue, more than other things do; and that they do attract their Life, Figure, or Shape, and Eſſence, out of the air, like as the Animals do, that ſo they may be nouriſhed, and encreaſe; but being deſtitute, or deprived thereof, they are obſerved to be as it were dead, and bound, or wholly void of vigor.

As for Example. Let the Minera, or Ore of Vitriol, or Alum, be digg'd out of the Earth, that the Vitriol, or Alum in this Minera, be already duly digeſted and ripened, the ſalt may even preſently be extracted thereout of, with common water. But if they have not as yet attained their full maturity, there is no ſalt extracted thence, unleſs the Minera be firſt torrified, or calcined. Nay more, a Minera, or Ore, that is yet leſs ripe, will not yield any Salt, neither by the force of the fire, nor without it; but muſt be yet farther expoſed to the air for ſome time, that ſo it may firſt attract that out of the air, that is requiſite to make Vitriol or Alum of, and thus (theſe things being firſt done) the Alum, or Vitriol, is moſt eaſily gotten thereout of, by a convenient Extraction and Evaporation.

We made mention in the ſecond part of the *Philoſophical Furnaces*, of a certain Minera, or Ore of Vitriol, which is plentifully found at [*Herckeroda* in *Haſſia*] ſticking in that Earth, which in that place they make their Crucibles or Pots, in great quantity with; and we ſhewed a way of making a red and ſweet Oil of Vitriol thereof, yet with this Caution, *viz.* That we ſhall not have from the ſaid Minera, not the leaſt portion at all of this Oil, if we do not expoſe it, broken in bits, to the cold air, for half a year, that ſo it may fall into powder. Such as have heeded this going to work, have made thereof a moſt ſweet Oil; but ſuch as have neglected the doing this, which I publiſhed out of a ſincere heart, and have reduced the ſaid Mineral into fine powder, and laboured to extract a ſalt thencefrom, by boiling it in ſimple water, beſtowed their labour in vain, becauſe of their refuſing to expoſe that Minera for a while to the air, and they received not ſo much as one Grane of Vitriol; and thereupon they took occaſion to ſlander me, and to accuſe me of Lying.

But now, when they have obſerved that this Mineral that they caſt away, being expoſed to the air, had attracted therefrom a ſalt by its Magnetick Virtue, when it had lain ſo long as to mould into powder of its own accord, and that thereout of a Vitriol doth proceed, they were enforced to believe that there lay hidden ſome Vitriol in thoſe ſtones; which notwithſtanding, could not be extracted by means of water, and ſo they have afterward publickly confeſſed, that what they afore gainſay'd, or oppos'd, was agreeable to the truth.

Thus likewiſe, there are various ſorts of Copper (Ores) endued with an attractive power, and upon that account, there cannot be ſeparated any Metal, by fuſion, when it is firſt taken out of the Earth, unleſs we have firſt expoſed it for ſome Months unto the Air.

Every Nitrous Earth, out of which Salt-petre hath already been extracted, doth (when it is again expoſed to the air) attract Salt-petre anew, and this we obſerve to happen in all Wood-aſhes, but eſpecially in Lime-ſtones Calcined; for, it attracteth more ſalt out of the air, than its weight was afore its being Calcined. For, at the firſt time, you will ſcarce get *ij.* or *iij.* ℔. of ſalt out of a centenary, or hundred weight; now by how much the longer it lies expoſed to the air afterwards, ſo much the more plenty of ſalt doth it yield, as is ſufficiently well known already. He that is ignorant of that we ſpeak, or elſe cannot underſtand it, let him make trial, and he ſhall find that what we ſay is a truth. Such as are Ideots do extreamly need theſe kind of Admonitions, that ſo, the buſineſs being the better underſtood, we may take from them all occaſion of ignorantly detracting from my Writings.

I ſay again, that if the ſtones which we here treat of, are but well known, though they do not at the firſt yield any ſalt, by endeavouring to extract it with ſimple water, yet is there no difficulty at all therein, nor ſhould we at all mind that, but let them only be left in the air for ſome due time, and by this means they will plentifully enough attract, and yield us, by a convenient extraction, good Salt-petre. The Ancients did extract Salt-petre, chiefly out of ſtones, which way of Extraction is now wholly loſt, or out of uſe. All the *Europeans* do now extract their Salt-petre out of the Earth of the Stables where Beaſts ſtand; albeit, that the very Name it ſelf of Salt-petre, doth declare, what matter it was firſt produced out of, *viz.* out of Rocks and ſtones: For 'tis as much as to ſay, ſalt educed out of Rocks.

Nay, even to this day there is Salt-petre extracted out of Rocks in the *Eaſt-Indies*, the which they tranſport thence in Ships into our Lands: Our Commonwealth

wealth of *Amsterdam* only doth yearly receive some thousands of hundreds of that Salt, which is extracted out of the bare Rocks without the addition of any other thing; I wonder what the reason is, that, that way of extracting is unknown to us *Germans*; surely I impute it meerly to the want of skill to manage this business.

Thus therefore do we think we have sufficiently declared that Nitre may in very deed be extracted out of stones; and that so clearly that I cannot see what reason any have to misbelieve my words.

But now that the certainty of the thing may be the more apparent, and that no body may think it a fable, that Salt-petre may be extracted out of stones, we will shew some places in which Salt-Petre lies in the stones in a most plenteous manner: And although that there are sundry such places that offer themselves unto us, where the stones contain Salt-petre in them, we will demonstrate the verity of this in those places we have lived in, for 'tis impossible for us expresly to pronounce such or such a Mountain in this or that Country full of Salt-Petre, which places we never saw. 'Tis not given us to search all places of the Earth, but such places as we have seen and come to, we have left but few things in them untoucht, whose nature we have not throughly examined.

Therefore for Examples sake, we will take some part out of our own Country, and exhibit or shew unto all Men, those stones which are therein found to participate of Salt-petre, any one that is studious in these affairs may do the same in other places, and make a diligent inquiry into them, and he will find that almost all Mountains are filled therewith, and yet is known to none or at least-wise to but a very few. In *Francia*, (or *Franconia*) and indeed at *Kitzing* where I dwelt before I came to *Holland*, I often went into the Field in clear weather, with an intent to search out Minerals, and although that sundry Men ignorant of (such) businesses, do report that there are not any Minerals atall to be found in *Franconia*, and that never any Veins of Gold or any other Metal have been found there, because all the Inhabitants do live contentedly with the plentiful provenue of Wine and Corn; nor do they labour about finding out any other Treasures (for there is not any Country in all *Germany* in which is gathered more abundance of Wine, and of a better sort, than in *Franconia* aforesaid; which gathering of Wine is to be accompted to the *Franks* or *Franconians* instead of Mine-pits, and yield them imployment enough) yet nevertheless forasmuch as my mind was ever bent that way, and I was naturally inclined to search very inwardly into those things which offer themselves unto us, amongst the wonderful works of the most great and glorious God, I could not omit the visiting such places, which seemed to all Men as unfit for bringing forth Minerals, and which were judged to be clearly void of the same, as being willing to try whether or no some things that others knew not of might not offer themselves unto me. Nor was my hopes in vain, for I found far more than my expectation was, and if necessity required I could shew those very places.

But forasmuch as I have proposed to my self, here to shew such places only in which Salt-petre may be plentifully made, I will at this time pass by the other Minerals in silence: Yet so, as not wholly to leave such things, as offer themselves in the way, untoucht. I will therefore take in hand some part of the *Rhine*, which is between *Kitzing* and *Aschaffenberg*, and will will very briefly (for my purpose is not to write a Chronicle) shew what treasures the most Great and Blessed GGD hath vouchsafed unto those places, besides Wine and Corn so plentifully abounding there.

Kitzing is an Eminent Town and well built, belongs to the Bishoprick of *Wurtsburg*, and is founded upon Lime-stone, and therefore the soil is very fruitful; and yields Wine and Corn in abundance. But as soon as ever we are past over the Bridge of the *Mhene*, the Earth begins to be sandy, and has abundance of Flints in it, which contain in them some Gold as well as Iron. The manner of extracting it, is described in the second Part of the *Prosperity of Germany*, and is confirmed in this third Part.

About a mile distance opposite to the said City is situated an high Mountain, very full of huge Trees, in this Mountain are various Castles (or Houses) the chief of which is the *Coffel* Castle, which is the House belonging by succession to the Lords of the County *de Coffel*: At the bottom of the Mountain there is a Village of the same name, belonging to the said Castle (or Palace.) In this Village there are abundance of Springs, the Waters of most of them I have often times tasted, and have perceived them to be mightily impregnated with Salt-petre, insomuch that the Beasts do altogether shun the drinking of them, much less can Men use them about the boiling of their Victuals: Yet some of them yield sweet water very fit for domestick affairs. These Nitrous Fountains are of no use, nor do they effect ought, save that they drive some Mills, and run through the Village a particular way afore they fall into the *Mhene*.

And forasmuch as the aforesaid Earls have known that the chief part (or most part) of the said Fountains are wholesome by reason of the plenty of Salt-petre in them; they have therefore taken care to have a great House built, that so the place may be rendred commodious for those that by reason of some disease should come unto this place for the sake of washing their sick bodies; and there are abundance known to come, that are ill, in the Summer time, from places far remote; several of them too by a due using this Bath are restored to their former health.

They know not any other use of these nitrous Fountains than what is aforesaid; whereas if they did but know how to add some Virtues to the said waters by the benefit of the Juice of the wood, of which there is great store in that place, they would find by the use of them then, many wonderful effects in the curing of Diseases.

Being therefore earnestly intent upon the search hereof, *viz.* from whence these nitrous Waters should chiefly proceed, I found that the Mountain nigh that place, extending it self for some miles, was every where full of Salt-petre, and that it stuck in the Rocks themselves, out of which whatsoever is on the Mountain grew. I did therefore diligently search out, what condition those Stones were of, which the workmen dig'd out in these places, and I knew that there was a great quantity of Salt-petre contained in them, insomuch, that as many Mountains as here (abouts) seem to be repleniished with the same: Nay more, if you shall break one or two of those Stones with which the Houses of the Village of *Coffel* are built, you shall find every where in them abundance of Salt-petre. I went to visit the place it self where those Stones are digged out, but found not any Salt-petre among the digging, because the Air had not as yet displaied its Virtues thereupon: But I observed that in those stones exposed a while to the Air, there was plenty of Salt-petre. He that would see it with his own Eyes, let him go into any House of the *Coffel* Village, whose

Wall

Walls are of ancient ſtanding, and he ſhall find that there is abundance of Salt-petre in thoſe ſtones, and withal, that the Pillars belonging to the Bath-houſe do yearly wax leſs, for as much as ſcalings of the thickneſs of the back of a Knife do ſtill fall off, by the power of the ſeparated Salt-petre, as I have often very accurately and curiouſly obſerved. If the Earls or Counts did but know the true uſe of this excellent and occult Treaſure, they would get far greater riches out of that bare Mountain only than by all the County. I doubt not but that ſeeing I have in this place detected this Treaſure, there will ſome be found that will labour for their own profits ſake to find it out.

Not far off from the ſaid Mountain the whole Earth abounds with Iron, not in the form of Veins but of Reins, inſomuch that the Metal of Iron offers it ſelf in various particles or pieces of diverſe magnitudes; for in ſome places it is found as big as an Hazle-nut, or an Acorn; in other places as big as an Egg, or ones Fiſt, yea and as big ſometimes as ones Head, which by the force of the Fire is made facile and yields abundance of Iron; nor did I ever yet meet with any Metal of that ſort more excellent than that is, but no body knows it, though it may be commodiouſly prepared or fitted for the uſe of Man, becauſe there is in this place plenty enough of Wood and Water to be had [for ſuch a purpoſe.]

This Mountain ſtretcheth out it ſelf ſome miles, reaching as far as *Iphovia*, and the juriſdiction of the City of *Wurtzburg*; ſo that the chiefeſt and greateſt part thereof is ſeated in the Biſhoprick of *Wurtzburg*: And therefore might immenſe and vaſt Treaſures be gotten, were there but ſuch as were lovers of Art and would make themſelves skill'd in the Operation.

Beſides, this Mountain yields abundance of white and red Gypſum, which may be reduced to an exceeding whiteneſs by the force of the Fire.

Beſides this too, we have known Marble and Alabaſter digg'd out hence, and yet it has not been very durable, for it becomes nitrous after it hath lain expoſed a while to the Air, and falls to powder, and yields plenty of Salt-petre, were it but rightly managed, for there's no want of Wood here.

There is yet moreover found in the ſaid Mountain another Caſtle which is called *Swansburg*, and belongs to the Biſhoprick of *Wurtzburg*, where the Soldiers did heretofore uſe the Metallick Rods, to ſearch after, and to ſee if they could find (by the uſing them) ſome Treaſures; and they tried whether or no (the Caſtle being burnt by the occaſion of the War) any ſuch Treaſures lay any where hidden. What they found I do not yet know: But this I know, that the ſaid Rods did ſhew good Metal to be every where (thereabouts) The which thing gave occaſion of explaining or unfolding the ſaid matter in its proper places. Beſides this, they digged up nothing elſe but ſuch nitrous ſtones for ſome fathoms depth. I once viewed this place, and found that the ſtones extracted ſome years afore out of this Mountain were altogether brittle, and is a manifeſt token that the whole Mountain is fill'd with Salt-petre.

There is beſides this Mountain, another nitrous one that I know of, of the like condition in the mid-way 'twixt *Kitzing* and *Wernfeld* (and is about a miles diſtance from *Carlſtadt*) but that which is here had, differs from the former in this, *viz.* that the ſtones which it exhibits are of a red colour, nor are they ſo much impregnated with Salt-petre, as thoſe of *Kitzing* aforeſaid, for they are richer in Petre, and are of a more aſhy colour.

There are likewiſe ſuch kind of ſtones alſo that they cut or dig forth at the *Mhene* near the City *Rotenfeldt*, but they have not in them ſo much Salt-petre as thoſe have that are found in the *Coſſel* and *Swanſburg* Mountain.

There's abundance of ſuch ſtones in ſeveral places in *France*, but my purpoſe is not to mention them all, for I was minded to mention ſuch only as my ſelf have ſeen, and that are near bordering upon the *Mhene*.

They that have a mind to deal with them may make their ſearch, and they will find in all Countrys of the Earth fit ſtones for their purpoſe, the which we may hereby know, if being kept a while in the Air, they wax ſoft, and ſcale off in moſt thin leaves, and there ſticks to your Fingers in rubbing them off, a reddiſh Meal.

Beſides this too, you may have a moſt certain ſign of ſuch Petry places by thoſe Spiders that have a ſmall body and round, and long feet, for they ſtick to thoſe ſtones in abundant meaſure: For ſuch Spiders do not feed upon hearbs, graſs, flies or other inſects, but on old Walls, and they ſeat themſelves chiefeſt of all on thoſe aforeſaid ſtones. They are not all venemous as the common houſe Spiders are, and therefore the Children do gather them, and are much delighted with them. Now they ſticking on to the ſofter ſandiſh ſtones do moſt certainly demonſtrate that Salt-petre is contained in them; for tis that which they are nouriſhed with, and conſerve their life by, and this I was willing to ſignify unto you. But put caſe that that no ſuch nitrous ſtones were to be found, yet however there is not the opportunity denied us of making Salt-petre of the common Lime-making ſtones, and of them there is every where plenty enough, if they are calcined by the benefit of Wood, and made nitrous with the juice of wood.

What ſhall I ſay of the Calcined fæces of *Tartar* which are yearly gathered up and thrown away in vaſt quantities, in all that tract which lies on the River *Mhene*, between *Bamberg* and *Franckfort*, whereas notwithſtanding ſome hundreds of hundreds weight of Salt-petre might be extracted thence-from, did they but mind it. For whatſoever Tartar is therein contained, is all of it Salt-petre when 'tis duly boiled with a Lixivium of Lime, and being hence ſtrained, and a ſufficient evaporation made, it be ſet by to Chryſtallize. For it attracts the ſoul after a magnetick manner, which Operation if rightly inſtituted, there may be prepared thence-from a moſt inflammable nitre in three days ſpace, the which is likewiſe of far greater profit than the getting out the Tartar by the help of a Preſs, and with a great deal of labour; or elſe than the making Potaſhes, as we ſee uſually done.

Beſides too, there are found other ſtones that being burnt do yield abundance of Salt-petre, ſuch as are the Tophi (or ſoft ſandy ſtones) which may be abundantly gathered near *Triefelſtein*, which is a Monaſtery ſituate on the *Mhene*, and in other places of *Germany* they make even whole Mountains: So that it is evident that there is no where any want of convenient matter to gather Salt-petre from, if Men would but ſet their hands to the work. Theſe ſtones are obvious unto all; and who knows what Treaſures the Woods (which we do not at all ſearch into) abound withal? Would time permit me I could ſhew that various kinds of Metals are conſerved in the Mountains ſituate between *Kitzing* and *Franckfort*, and eſpecially in the *Speſhardenſine* (Mountain,) the diſcloſing of which, ſome other more commodious place will admit of.

Now

Now follows what we mentioned of the aforesaid

LAZARUS ERCKER.

Of the manner of Boiling Salt-petre.

AND FIRST

By what means a Lixivium is to be made out of a Nitrous Earth.

IF you are minded to make a Lixivium of such an Earth, dig it as deep as you shall find by proving it to be either good or naught, especially if you intend to make it in great quantity, and keep it in a dry place. Then take care to have some great wooden Tubs, or Vessels made, so large, that each of them may hold about some ten Wheel-barrows full of the Earth, and whereby you may be able to prepare Lixivium enough, answerable to the work you have proposed to your self to do, and to the bigness of your Copper. Now there are commonly required for such a work, to one Copper Pan that weighs two hundred weight, eight Wooden Vessels which are to be placed in such order, that on each side there may stand four in a row, opposite to each other. These same Tubs are to be so far distant from the next Collateral Vessels, as is requisite for the Wheel-Barrow wherein the Earth is brought to come between: Yea, and it is necessary that there be half an Ell's space betwixt the said Tubs and the Earth, or Ground, it self, whereon they are placed. Likewise, each of the Vessels, or Tubs, must have a hole in the fore-part, and towards the bottom thereof, fit to put in a Plug (or Tap) at: Then finally, there must be put under those Plugs, a long Vessel like a Channel-pipe, which may receive in it the Lixivium running out of the Tubs, and may guide it along into a peculiar Wooden Vessel, as into a common Store-house set in the Earth hollowed for that purpose, to receive the said Lee in.

All your Tubs being thus rightly ordered, put in upon every Tubs bottom another (false) wooden bottom, perforated with many Holes, and let it lie two Fingers breadth distant from the true bottom: Upon this (false) bottom lay yet another made of Bull-rushes, or your small sort of Reeds which grow plentifully in Ditches about the thickness of a quarter of an Ell: In want of these Reeds throw in upon the aforementioned perforated bottom, the quantity of a Span (thick) of Chopt Hay, or Straw, laying some very thin boards thereon, that so it may not be scattered (or float) abroad. And your Vessels are made compleatly ready.

Now then, put of the Earth you have already tried and gathered, as much into each of your Tubs, as they can hold, yet with this Caution, That the top part of your Vessel be empty a Spans heighth. And observe this, that if you can get some old ashes of the Curriers, or Soap-boilers, as much of it as two or three Wheel-barrows will carry, it must be put in upon the topmost (made) bottom of the Tub, afore the Earth, but now spoken of, be put in. At the top of the earth, lay a Cover made of Twigs, (or Withes) and fasten it with a wooden stick at the top of the earth. This done, pour common water upon the earth contained in the Vessel, an Hands breadth in heighth, so as that it may rather touch (or be poured) on the Twigs, than the Earth it self, least the said earth become unequal thereby, and hollowed in several places. Let it stand thus for eight hours, which time being overpast, draw your Plug out, and let the water you poured on, run out at the hole beneath, which as long as it is muddy, you must always pour in again into the Vessel, repeating this so often, till it comes out clear, then keep it, and this water is called a weak Lee or Lixivium.

This done, pour common water again upon the earth from which the Lee hath been already, once separated, that so it may extract the residue of the Lixivium out of the earth; and this Lee is of no use, save that it may be poured on upon new earth, instead of simple water; for it oftentimes doth even yet contain a great deal of Nitre, insomuch, that you may sometimes extract out of an hundred weight thereof, three or four pound of Nitre.

This Extraction being finished, take out the unprofitable earth out of the Vessel, and put in new; and continue the Operation, after the aforesaid manner, reiterating it so long, and so often, until you have gotten store enough of the Lixivium, that the work of boiling be not intermitted for want of Lixivium.

Besides, there must be some Wooden Vessel placed at the upper part of the Copper which this Lixivium is boiled in, out of which may run so much Lixivium into the Copper as is wasted away by boiling, that so there may be still kept the same order of boiling, and the same quantity of Lixivium in the Copper. This boiling is to be on this wise continued, until a Centenary, or hundred weight of Lixivium in the Copper, yields according to the less assay (or weight) twenty five pounds of Nitre; and this may be done in two Days, and one Night.

This being thus done, you must have ready yet two Tubs, or Vessels (more) of Wood, made after the afore prescribed manner, and furnished with a (false) perforated wooden bottom, besides its own bottom, and likewise with such a bottom as is made of Reeds (or Bull rushes); only you are to observe this here; That there must be put yet another perforated wooden bottom upon this topmost bottom of Reeds, upon

which there muſt be firſt caſt in ſome chop'd Straw, then ſome Aſhes of Firr, Beach, or any other Tree, ſo much in quantity as may overtop the Straw an Ell or Cubit, [*Ulna*] high; or rather (if it may be had for a very mean price) as much as may fill the Tubs, or Veſſels. But yet, theſe Aſhes are not to be juſt ſimply thrown in (as they are) upon the Straw, but afore this is done, they muſt be firſt well mixt together, then moiſtened with ſome of the beſt hot Lixivium, that there may be made a Maſs. Then when the Aſhes are on this wiſe prepared, and put in the Veſſel, the Lixivium boil'd to its heighth, and which yields in the proof twenty five pound, muſt be poured thereon, as hot as poſſibly it may, and is to be often drawn off by the lower hole, until (if troubled or muddy) it becomes clear.

After that all the Lee hath thus paſſed through the Aſhes of both Tubs (the which is done upon this account, That all its fatneſs may paſs into (or be left with) the Aſhes, which Aſhes are hereby rendred ſtronger to waſh withal) keep it in a peculiar Veſſel.

Then pour the common Lee or Lixivium upon the Aſhes remaining in the Tubs, which when it hath paſſed through the Aſhes, is called the ſecond ſtronger Lixivium: Then again pour on yet a third time, hot Lixivium, and when 'tis drawn off, it is called the ſecond weaker Lixivium: Laſtly, the common Lee, or Lixivium, may be poured on cold upon the Aſhes, that ſo all the virtue of the ſame may be wholly extracted.

The Figure before going (*Numb.* 1.) will ſhew you the way of placing the Tubs, of preparing the Lixivium, and ordering the boiling.

A *Are the eight Wooden Tubs, wherein the earth is put.*

B *Channels, or Conveyances, by which the water runs into the ſaid Tubs.*

C *Channels, or Gutters, by which the Lixivium is conveyed into a Veſſel ſet thereunder.*

D *The Veſſel in which the Lixivium is gathered, or received.*

E *The little Veſſel out of which the Lixivium runs into the Copper.*

F *The Furnace.*

G *The Copper.*

H *The door of the Furnace whereby Wood is put in under the Copper.*

I *The Lower Wind-draught (or Aſh-hole) of the Furnace.*

K *The inward ſhape of the Furnace.*

L *An Iron Grate, which the Wood is put upon.*

The manner of preparing the Liquor, out of which Salt-petre *may be made by Boiling.*

Firſt of all, pour your ſecond weaker Lixivium into your Copper, and ſet it a boiling, then let your ſecond ſtronger Lixivium run thereinto by little and little; and then laſtly, the firſt Lixivium it ſelf, and which is the chiefeſt of all, until the Copper be almoſt filled, and the Lixivium be boil'd enough to ſhoot.

And now when you perceive that your Liquor is made ſtrong enough by boiling, put in a Braſs Ladle perforated (or full of holes) ſeveral times, even to the bottom of the Copper, and if the Lixivium lets fall out of it any Salt, you will find it at the bottom, the which you may take up with your Ladle.

Note alſo, That the Scum which at the end of this Boiling is plentifully gathered, muſt be carefully taken away: Now then try the readineſs of your Lixiviums Cryſtallization, on this wiſe: Put either two or three drops on a cold Iron, or on a Poliſh'd Plate of Iron, and if it ſtands, or grows hard; that is, if when you turn the Iron up and down, it does not run (or flow) down, theſe are ſigns of the fitneſs of your Liquors Cryſtallization. Or elſe, you may put ſome of the Lixivium in a Braſs Veſſel, and ſet it in cold water, and ſo you ſhall ſee whether the Liquor be fitted enough to Cryſtallize; for aſſoon as ever the Lixivium ſhall be cold, there will be plenty of Salt-petre generated: Nay, even the very Braſs Spoon it ſelf denotes the goodneſs of the Liquor, it being put into the Liquor, and again taken out, it will ſhow it ſticking on it, as if it were Oil.

Out of a Centenary, or hundred weight of Liquor thus perfectly prepared, there will proceed more than ſeventy pound of Salt-petre.

The way of rightly uſing the Liquor for the Generating of a more Crude Salt-petre.

POur your Liquor prepared after the aforeſhown manner, out of the Copper into a narrow Tub, or Veſſel, made of Firr, or Pine-tree wood; wherein let it remain quiet, till it be a little refrigerated, and the muddineſs, or ſlimyneſs [*Limus*] appear, and you find that the ſalt ſticks on in Granes to the ſides of the Veſſel; now when you perceive your Lixivium ſo cooled, as that you can put your finger thereinto without burning, pull out the Plug, wherewith an hole made in this long Veſſel, about a ſpan's heighth from the bottom, was ſhut, or ſtopt, and ſo let the Liquor run forth, into very great Wooden Veſſels, and deep, purpoſely made for ſuch a buſineſs; or elſe into Copper Pans, buried almoſt (up to their Necks) in the earth, (for the cooler the place is, which they ſtand in, ſo much the better, and the more plenty of Salt-petre is gathered, and Cryſtallizeth) and you will find that your crude Salt-petre will ſhoot therein, the thickneſs of almoſt two fingers breadth, partly of a whitiſh colour, partly yellow, and partly blackiſh.

After that this boil'd Liquor hath ſtood for two days, and ſo many nights in the Veſſel, the Lixivium of the Salt-petre which ſwims at top, muſt be taken away, which you may mix with the ſtrong Lixivium, and pour a ſecond time upon Aſhes, for elſe the Lixivium will contract too much fatneſs, and there will be no Salt generated.

Sometimes it happens, that when the Aſhes are not good, there's no ſalt at all gathered in the Liquor, in which caſe there is no preſenter Remedy, than to mix ſuch a Lixivium ſtronger than is fit, with another, and ſo pour it again upon new, and good Aſhes, and then let the boiling be again perfected after the afore-preſcribed manner.

Likewiſe, when in the boiling you find the Lixivium very muddy, whereby the Collection of the Salt is oft-times hindred, it muſt be taken away, and let the Waſher-Women, or Lawndreſſes have it, and other muſt

must be substituted in its room, and be farther purified by the help of Ashes.

The Figure signed (*Numb.* 2.) shews the manner of preparing the Liquor by boiling, and of extracting and gathering the Salt thereout of.

A *Long narrow Tubs, or Vessels, in which the decocted Liquor of the Lixivium is cooled.*

B *The Furnace wherein the Copper stands.*

C *The Man that manageth the boiling, and extracts, or draws out the salt with a Ladle, the which he lays in a Withy Basket placed on the Copper, that so the Lixivium (in it) may again run down into the Copper.*

D *The little Basket.*

E *The little Tub out of which the strong Lixivium runs (by little and little) into the Copper.*

F *Coolers, or Vessels, in which the Crude* Salt-petre *shoots.*

G *Four Brass Pans put in the Earth, hollowed for the purpose, in which likewise the* Salt-petre *is generated (or shoots.)*

H *A strong Vessel whereinto the Lixivium remaining after the generating (or shooting) of the* Salt-petre, *is put.*

The way to purifie the Crude Salt-petre.

WHen all these things are thus done, and the Lixivium that swims at the top of the Salt-petre is taken away, lift up those Vessels, or Brass Pans, containing that salt, and turn them up and down in some convenient place, that so the residue of the Lixivium, that lies as yet in them may flow, or run clearly out, into another Vessel set thereunder.

This done, take the Salt-petre out of the Coolers, or out of the Coppers (or Brass Pans) with an Iron Spatula, or rather with such an Instrument as your Plasterers use (une telle, a Truel) and put it in a Tub that has a hole in the bottom thereof, that so the Lixivium may be perfectly separated therefrom. They that sell that crude Salt-petre, and not at all purified, for the Salt-petre Boilers, do pour thereon pure (or clear) Well-water, by the means of which, it is made more white, that which is thencefrom separated they do again mix with other stronger Lixivium and so boil it up for the following use.

But if you have a mind to purifie this crude Nitre from its salt, and all its Impurities, that it may be rendred fair, and white, you are to proceed this following way:

Take almost as much Well-water as is sufficient for the dissolution of the Salt-petre, put it in the purifying Copper Vessel, first cleaned with water, and dried with a cloth, and put the fire under it, and make it most exceeding hot, then throw in your Salt-petre by little and little, and in pieces, continually stirring the Salt-petre that sticks at the bottom with a spoon, that it may be the easier, and sooner dissolved; this only is to be observed, that there is required a more gentle fire, while the Salt-petre is cast into the Copper, so as the water may be kept always hot. When all the Salt-petre is almost dissolved in the water, promote the boiling thereof, by augmenting the fire, then try if there be any salt in a (biggish) gross form, residing in the bottom of the Copper Vessel, which if you find to be, (for indeed, the Salt-petre it self is not so very easily dissolved, nor doth its being admixt in a more copious manner, at all benefit the Lixivium) take it forth with a Spoon, (or Ladle.)

This done, separate the Scum swimming at top of the boiling water, then have ready a Brass Vessel that will hold about ℥j.ſs. of Liquor, fill it half full with the Lixivium, set the Vessel in cold water to cool, and you shall find your Nitre presently to Crystallize, or shoot therein.

Hereby may you try whether your Purgative water be strong enough, or not; for if it be stronger than is fit, you will find a little skin spread it self over the matter contained in the Vessel, and when it comes to be so, add thereunto more hot water, keeping the fire in that degree of heat, as may suffice to keep the water contained in the Copper, gently boiling.

Now when you have kept it thus boiling for some season, try the goodness of your water again, after the aforesaid manner; and if you shall find a Crystallization therein, and no Concretion, or heaping-together, leaving a gaping, or chap in the midst, the business is well done; but if it be otherwise (than thus well done) so that it be wholly shut in (or gathers a skin all over) at top, pour on hot water, until your Matters come to succeed after the manner aforesaid.

Then after all this, take of the best Wine Vinegar, about one pound thereof, and pour it into the said water, and you will presently see a blackish spume, or filth arise in plenty at the top thereof, and when you have left it so a while, it may be easily taken off, because of the thickness it contracts.

The boiling being yet a while longer continued, pour in the same quantity of Vinegar again, and diligently separate the Scum as afore: This pouring on of Vinegar, and separating of the Scum, may be repeated yet a third time, and oftner, whereby the purgatory water may be made altogether pure, and that there appears not any more spume.

When all this is done, cast in upon this water two or three Ounces of Burnt-Alum, most finely powdered, stir all well with a Spatula, whereby the Salt-petre may shoot into longer Crystals.

Then after this, pour out the purgatory water into the aforementioned deep Vessels, and cover them over with Linen Cloths, that the Liquor cool not. Let it stand thus one hour or two at most, and a yellow slime will settle to the bottom: Then let the water while it is yet warm flow out hence, into other Vessels made of wood, and especially of Elm, and which are large enough; or else, you may let it run into Copper Pans set deep in the Earth, for the better coolings sake, which cover over very neatly with Cloths, that so the Crystallization may begin from the bottom, and not at the upper part, as we see it wont to happen, where it is not kept by Coverings from the External cold: And we also observe therein too, that the Crystals shoot not into that length, as when the Crystallization begins from the bottom.

Let them stand thus for two or three days, until you see no more Crystals generated, which you may on this wise try.

Put some of the Lixivium in your (little) probatory Vessel, wherein, if you find that there are no more Crystals generated, you may take out the rest of the Lixivium: Then take out the Petre with an Iron Spatula (or Truel) and put it into a Vessel that is full of holes in the bottom, that so all the Lixivium may be the better separated therefrom. And you shall

have

have your Salt-petre pure and white, and freed from its Salt.

Forasmuch as the Lixivium here separated hath as yet some saltness in it, it may be mixed with other strong Lixivium to be(agen)boil'd up,for the production of the Crude Salt-petre is usually holpen forward there-withal.

Some there are that for the better purifying the Petre, do put Calx vive in together (with it) whereby the water becomes most white like Milk, and the Salt-petre gets a greater fairness.

You must withal observe that during the time that the purifying water is contained in the Copper, your fire must be most gentle, least by overmuch boiling you get some damage, for a little fire is able easily to cause (a too vehement) ebullition, and when it has got strength (or the start of you) it is hardly allayed again. The scum which you take off from it you may pour upon ashes as if it were a Lixivium, that so nothing (from whence any profit can be hoped for) may be lost.

There is sometimes seen to stick to the bottom of the Copper (especially when it is used about many boilings) a certain stony and hard substance like Tartar, which unless it be taken away, your Copper will easily suffer damage under that same matter and be burnt.

The earth and ashes left, after the weak Lixivium (hath past through them) are to be laid up in some convenient place, and there kept for four years or more, that so they may be again apt to yield a-new more Lixivium by extraction; which, that it may be the better and easier done, there must be made in them (many weeks afore they are wrought upon) by digging some Pits or Gutters, that so they may be freed by the heat of the Sun from that moisture wherewith they as yet abound. Nor do the ancients so much wander from the Truth in that they suppose it much better and more profitable to keep all the earth under a roof or shed, and that it will be far sooner reduced unto a fitting goodness, than to lie open to the weather, for much of the Salt-petre is corrupted (or spoiled) with an abundance of moisture,especially with the Rain it self: For it needs only a little wetting whereby it may be generated, and extreamly shuns, or is injured by too much moisture.

Besides these ways, there are many that mix with this earth that is yet contained in the Tub the Saw-dust of Firr, or some other Wood (the height of) a Fingers length (on it): And they perswade that Salt-petre is also generated and multiplied from that fatness which is mixed with the Saw-dust, and that the earth prepared on this wise can be so changed in a years space (so it be kept in a dry place) that it may be again made use of as afore. Yea and they suppose too that they can do much here, if they pour upon such a barren (or lean) earth, thus lying in a dry place, the reliques or remains of the dyes, which the *Dyers* are otherwise wont to throw away, and evident it is that they are aluminous, but yet not so frequently.

Besides such waters of the *Dyers* they are wont also to mix soot with their earth, (yea and the ashes too of which Lawndresses do commonly make their Lee;) that so it may be made the more fruitful and may be the sooner brought to use.

This only is to be noted, that there are sometimes found earths that give a thick black Lee, which being used by it self is too fat, to which is to be added a leaner ad dryer earth, that so the Salt-petre may be the better and more plentifully generated.

The way therefore how, and the instruments by which crude Salt-petre is purifyed, is shown by the 6 and 8 Figure (in *Lazarus Ercker*,s Book I think he means.)

The manner of purifying the gross and blackish Salt *that comes out of the* Salt petre.

THat black or rather ashy colour Salt, which is found in the Copper while the nitre is prepared by boiling, and likewise in the narrow Tub or Vessel, may be reduced into very good Salt, and very convenient for daily use, and no ways at all hurtful to Man, if it be but duly purified; which said purification is to be thus ordered.

The Copper being well cleaned fill it with most clear Well-water, put fire under it and make it boil, throw in the said Salt by times (not all at once)into the boiling water, that so it may be dissolved; which,that it may be the sooner and better done, stir it continually with a *Spatula*,when you think that it is all dissolved pourout the Lixivium into some Vessel or Tub, & you shall see the grosser part will settle to the bottom, and the Lixivium will clear up: When you perceive this, pour this clear Lixivium again into the cleansed Copper, and boil it so long till the Salt settles to the bottom, which take out of the said Copper with a perforated Ladle, and put it in a Basket that is placed over the Copper, that so all the superfluous Lee or moisture may again run down into the Copper, and yields (or leaves) the Salt perfect and dry.

Some there are who afore they use this Salt about domestick affairs, do decrepitate it first, and perswade themselves that it becomes thereby the more virtuous (or strong.)

What remains behind of the Lixivium in the Copper, you may boil it up like as you would any other Lixivium appointed to be Crystallized, then pour it out into the Vessels destinated to that purpose, and you shall see Salt-petre to be generated in them; for seeing the said Salt proceedeth out of the Salt-petre, this Lixivium cannot be wholly void of Salt-petre, and therefore may it be separated from that Salt by the aforesaid way, and be purified.

But you are to note here, that where there is too great a quantity of Salt-petre permixt with the said Salt, or that the Salt it self is too black and impure, that Salt cannot get its due lustre and whiteness by barely one such a purifying Operation, and therefore there is requisite a reiteration of this Operation, so that it be again dissolved in new water, and be purifyed, whereby it may become altogether white.

However, such a black and impure Salt, may be purified even by this way (following.) Pour the solution it self, while 'tis yet hot, (the water I mean in which the Salt is dissolved) upon the ashes which a Lixivium hath been already poured on before, and you shall see the Salt Lixivium to be wholly purified: But yet all the Salt which is extracted thence, is not sufficiently white, but that which is gathered last of all is yellowish, and therefore must be yet once again purified. Note also here, that when such a Lixivium of Salt is poured on the ashes, they must be well edulcorated (after the operation is finished)least the Salt sticking in the Reedy or Bull-rush-bottom should give an unfitting saltness to theLixivium that is nextpoured thereupon.

And thus have you the common method of boiling and preparing Salt-petre, in which you meet with what

what may be well disallowed or rejected, *viz.* it is extreamly tedious, nor is it at all gainful, for out of a centenary of Lixivium, we have no more than three or four pound of Petre; to get which too, all the rest of the water must be done off by evaporation, which is a long time doing, and requires no small costs. Yet I will shew in what follows, by what means this inconvenience may be prevented, which I have proved by mine own experience.

The way of augmenting the Crude Lixivium afore its boiling.

THE Salt-petre boilers have hitherto variously sought after the way of augmenting (or fortifying) the Lixivium of Salt-petre, that is, of causing a more plentiful provenue of Salt-petre, in the Water remaining of the extraction of Salt-petre, but in vain, because they were ignorant of the lesser proof which all things here are tried by. Its augmentation is done on this wise.

Take of a Lixivium, a Centenary of which contains *iiij.* ℔. of Nitre, pour so much of it as a Tub or Vessel will hold, upon new earth, let it stand for twelve hours; then draw off the Lixivium, and as much as you find wanting of what you poured on (which may easily be known by the emptiness of the measure which it was in, afore you poured it on, and in which it is now gathered or received again) pour so much simple water on the Earth, which draw off in like manner, and mix it with the Lixivium, and you will then have the same quantity that you had in your Vessel afore. This done try the Lixivium by the lesser experiment or proof and you will find it to contain *vj.* ℔. of Nitre. Pour this Lixivium that contains in it *vj.* ℔ of Nitre upon other new earth, and proceed on the manner aforesaid, and you shall have your Lixivium to contain *ix.* ℔. of Nitre. You may pour this a third time upon other new earth & proceed on with it after the aforesaid manner, and you shall yet have more Nitre out of a Centenary of Lixivium. But you must be always wary in this Operation, that you draw off, neither more nor less Lixivium from the earth than you had before in the Vessel. These things it pleased me to add, concerning the second pouring on of water, meerly for the experiments or proofs sake, whereby we may be made certain of the augmentation thereof (forasmuch as the Lixivium doth by this means hold in it more Nitre) and that we may be forced to acknowledge its augmentation even in that way. Then after this is done, you may use the weaker Lixivium instead of water, to fill up the first measure, and so the Lixivium will be the easier, and more augmented; and we may in a short time have sufficient quantity hereof for to boil. And although this augmentation of the Lixivium requires a great deal of labour, yet are all the (pains, &c.) recompensed, because we hereby get in one Weeks space, and with less expence of Wood, far more Nitre than by the other common ways: But yet there are requisite more Vessels for this kind of working, wherein the separated Lixivium may be kept.

I will also give the Reader a manuduction here, by what way the boiling of the Lixivium is to be ordered, or contrived: First of all, this is well to be regarded, that forasmuch as a great boiling requires a great quantity of earth, and yet there does not at all times, earth of a like goodness offer it self (especially seeing a Man cannot make proof of it all) upon which the costs and labours (necessary about it) may be well (or at the best hand) bestowed: It seems wholly expedient, not to make such a great Coction (or boiling-trade) but to do it with only three or four Tubs, that so we may choose only the best convenient earth, which we may dig in the Cities (or Towns) out of Houses of long standing, and out of Stables, but yet not too deep: Such a Lixivium as contains in an hundred weight of it eight pounds of Nitre, may be increased to eighteen or twenty pounds, if we proceed according to the aforesaid method. And therefore such Nitre boilers as inhabit those regions where there is scarcity of Wood may give hereunto good heed.

Now the Lixivium augmented on this wise, doth not attract all the nitre out of the earth it self, but there doth yet some always remain behind: And therefore you need not presently throw it away, but pour thereupon some simple Waters, which after it hath stood thereon for some hours, draw off again, and you shall have a weak Lixivium, which you may try by the proof, and proceed on therewith in the method of augmenting it, and so you will have a continual labour.

This likewise is to be observed in an especial manner, let the Work-house in which this boiling up of your Salt-petre is done, be very low, and covered with thatch, that so the heat may be the better kept about the Tubs, and this Operation may be done as well in the Winter as in the Summer, and that the weak Lixivium may not at all congeal.

And now, even as Salt-petre is made by boiling, out of the Lixivium which is made of Earth, even so is it of that Lixivium which is gotten out of Stones or the Lime (and Dung) Arches (afore-spoken of;) only there is this difference, That this last way of my contrivance (with stones &c.) is easier, and yields more Nitre. Such as are pleased with this kind of work may set about it, nor will they bestow their Labours in vain; there may be abundance of things, and those wonderful ones too, effected with Salt-petre, as I have abundantly demonstrated in my foregoing Writings, and shall in my following ones too, more clearly demonstrate if God vouchsafe strength and abilities.

But before I come to the practice it self, and to describe the benefits of Salt-petre in specie (or in particular) it is wholly necessary to shew how wonderful, yea how incomparable a subject, that Salt-petre is. And this thing I have already handled at large in the *Second Part of the Philosophical Furnaces*, in the *Second Part of the Pharmacopœia Spagyrica*, but especially in my *Miraculum Mundi*, and in the *Explication*, and *Continuation*, and *Defence* of the same.

Here the Author runs out into a large digression in his own vindication, upon the occasion of certain Letters sent him by one I. H. S. *who Stiled himself the Son of* Sendivogius; *in which Letters he highly extols the Hermetick learning of the Author, but blames him for Writing so plainly of great secrets, add exhorts him to be more sparing and obscure for the future. Withal offering his service (and begging the Authors leave) to defend his Person and Writings against* Farnner *and others. The Author not taking his advice nor yet accepting of his service (suspecting him to be a self designer) this* I. H. S. *afterwards published a Book entituled* Lucerna Salis Philosophorum. *In which he offers to teach the making of the* Philosophers-stone *at a price or reward; and reproacheth* Glauber *whom he before had so highly magnified in several Letters, advising People to avoid his writings as Sophistical. In this Treatise he mentions a Prediction or Prophecy of three Monarchs that were to appear in the*

World: The first of Paracelsus, *concerning* Elias *the Artist. Secondly, That of* Cosmopolita *of the coming of the* Northern Monarch. *Thirdly, That of* Jacob Behmen, *That a Lily shall bring forth Flowers from the North. He intimates that himself is the* Elias *of Arts. Secondly, That some* Northern Monarch *shall do mighty things in the World: And Thirdly, that the Writings of* Jacob Behmen *should be again Printed a new. After the Author hath shewed the ill dealing of this* I. H. S. *with him, and vindicated himself, then he proceeds briefly to Comment upon these three Predictions or Prophecies.*

By what hath been said, may the Candid and well-minded Reader judge what judgment is to be had of this Monarch of Arts I. H. S. Every one that reads them will find whether or no such a Monarchy is to be expected from such a ones Writings. But now that I my self may likewise here produce my opinion, concerning *Paracelsus* his meaning where he writeth, *I say that the most eminent Secrets will not be known afore* Elias *the Artist shall come and teach them:* (But I pray) what hath the holy Man *Elias* to do with Arts? verily no thing at all. *Paracelsus* minded or pointed at some other thing, he well knew, that no body comes unto such knowledge, unless by Revelation from God, by godly Prayers, and by searching: This is the true *Elias* which *Paracelsus* speaketh of, if (*viz.*) the word *Elias* be read backwards, and E changed into A: For then 'tis the same with *Salia* (that is, Salts) such as these (*viz.* salts) are known unto, to them is *Elias* a master or teacher. And where the said *Paracelsus* speaketh of Salts he adds *Alchimy finds it (to be) in Nitre:* Hereby shewing and pointing at *Salia*, Salts, which word being read backward is *Elias*? And this is my opinion as touching the coming of *Elias* the Artist, and I do yet (again) say, that to him to whom Salts are known, hath *Elias* appeared. And let this be sufficient to have spoken of the first Monarchy of I. H. S. and what is to be judged thereof.

Now follows the Second Monarchy.

AS for the second Monarchy, he alledgeth the Prophecy of *Paracelsus*, which runs thus: *A Lion shall come from the North, and become the Monarch of the World:* Which Prediction is not at all to be understood according to the Letter. What has *Paracelsus* to do with the Northern Lion? What business has he with the Monarch of the World. Some there are that endeavour to attribute that Prophecy to one or other of the Northern Kings, but yet that was not in the least *Paracelsus*'s meaning, he drove at a far other-gues's business, and by that Lion he meant Salt-nitre, which is wont to be brought unto us by the Northern Winds, Rain and Snow, and that several times yearly as is well known unto all; hereupon many amongst the Philosophers, and some of them the latter Philosophers, have filled great Vessels with the Rain and Snow that comes out of the North, and aimed at the preparation of a Tincture thereout of, but they found nothing else but Salt-petre, which to get, I have shown a much shorter way.

Paracelsus, *Basilius*, and others have Written many things of the green and red Lion, all which are to be understood of Salt-nitre, which may most easily be transmuted into the green or red Lion, concerning which thing I my self have made mention in many places.

But some or other may reply, How can it be said that the Lion shall be expected out of the North, if *Paracelsus* did by it understand or mean Salt-petre, for that cannot be said to be expected (or waited for) which hath always been? Surely the approach of this Northern Lion is not to be supposed or thought to be as to the outside aspect and known use, but only according to the internal virtue, & the Treasure therein hidden; concerning which, the Philosophers have written many things enigmatically, and kept up all things most secretly. Verily he to whom the inside of Salt-petre is known will be able to report wonderful things, for 'tis that only that is the true Monarch, and is able to institute a good governance for those that possess and know it. This Monarch will not be to any one a stirrer up to kill others, and to take from others their Goods and Kingdoms, and to disquiet the whole World, as we see other Monarchs do, but he will bring Peace and Concord, and will perswade the Soldiers to stay at home and to get their food by the labour of their hands, and not to shed the blood of the innocent; he will injoin the greedy Usurers to be beneficial to the poor & to put an end to their immoderate usury; he will shew to the Divines, that all their contentions are vain, and that they cause nothing but inquietude, dissention and discord amongst Men, and will require at their hands to Preach concerning friendship to, and love of ones Neighbour, which under this unprofitable contending is wholly lost, and to banish away all hatred; and contrary-wise to strive after patience and Christian humility. These kind of Doctrines and governance the inward or inside knowledge of the Northern Lion will bring with him, and not any War or shedding of Blood. But afore the said Lion is tamed and made gentle, he is very ravenous, and the venomous Basilisk, and devouring Dragon, preying both upon Men and Beasts, demolishing Cities and Castles, and destroying Goods and Men together. Thus have I in brief expounded my opinion of the coming of the Lion from the North, let every one believe it as he listeth. And thus much shall suffice for the Second Monarchy, and how it is to be understood.

Now follows the third Monarchical Prophecy.

AS for what concerns the third Prophecy which I. H. S. doth also make mention of, (& will have it) to concern a certain Writer, whose name is *Jacob Behmen*, who exercised the *Shooe-makers* Craft, and published many Theological and also Chymical things, which *John Beth* doth again Print: As far as I know by his writings, he was an honest Man, but I do not know what he understood in Alchimy; but however this is evident, that he never exercised or practised Chymical Operations, and that his Chymical writings are most difficult to be understood, but his Theological writings are read by many. My opinion concerning the business is this, that this same I. H. S. was minded to quarrel with me, that so there being a brawling bred between us he might make his Books the more saleable. I have therefore thus plainly answered him, but if he proceed on in contrarying and opposing me, I shall be constrained *Nolens Volens* to meet with him another kind of way, for I am even wearied and glutted with contention. If he will needs brawl and scold let him do it with those that have no work to do, such as he himself & his associates are, who have no Family to rule and look after, I can for my own part bestow my time better than in those contentions, which bring no

no profit, but only to the Bookseller, whose Books before they are known sell well.

But to conclude, I will in a few words open the ill affected mind of J. H. S. to the Candid Reader. When I had lookt into his Treatise, and perceived that he had ranked me amongst the Sophisters, I showed to some of my faithful Friends, the Letters which he had written unto me, that so I might hear their Judgment concerning them; verily, there was not one amongst them all, but wondered at the wicked mind and falseness of this Man: Yea, one of them did afterwards inform him by his Letters, what way I had purposed to take, *viz.* again to wipe off that undeserved Title he had put upon me, and to defend my self against such Monstrous Impiety; To which he received from the said *J. H. S.* an Answer, which he likewise shewed me, wherein (amongst other things) he pretends, that the cause of his hatred [against me] was, because I had in some places written so very clearly of the Universal Medicine: Yea, and he farther adds, that it is no such great despising one, or Contempt to call one a Sophister; for *Geber* was accounted for a Sophister, and yet was he a King. And that if I wrote against him, he would do the same against me, and endamage not only me, but my Children too; which Epistle is yet kept safe. Now let any Honest Man consider whether this be a Human, or Diabolical action.

Some, when they heard this, perswaded me to pass over all in silence, and that there would come of it such another brawling business as was with *Farnner*, whose Exhortation I yielded to, that I would not so much as once answer him, how great Lies soever he told, but rather purposed by referring all till the next Spring, to get me Friends by the benefit of my very eminent Inventions (God willing) which should not only intercede, or stand up for me, but also for my Children too, after my Decease: I doubt not, but that there may be some principal persons found, which are capable of overturning such Inhuman Perverseness.

These few things was I constrained to add (in a Parenthesis) for the defence of my Writings, thereby to paint out the deceitfulness of Men, and to discover what is to be opinionated concerning such turn-coated Foxes: The which I entreat the Reader not to take in evil part, but to accept of the Secrets laid open in this Treatise, as a Reward for his pains in reading this Apology.

Now follows the Most Potent Lion, and Monarch of the North; to whom none in the World may be compared, nor *did* ever any excel him in Glory and Power, or *shall be* like unto him.

But before I begin to write any thing of that Omnipotent Monarch, I have thought it profitable to add here in this place, for the better knowledge of the same, *Paracelsus* his Propheſie, as I met with it, whereby any one that is skill'd in nature, may sufficiently see, that *Paracelsus* did not mean a King, but the great Philosophical Mistery, and would point that out unto us: His Words therefore are as follows.

The Propheſie of Dr. *Philip Theophrastus Paracelsus* of the *Northern Lion.*

They will not leave me in my Sepulchre, but will hale me out thence, and lay me down towards the East: And I do foretell unto you, that there are three great Treasures hidden.

1. *The First is at* Weyda, *at the* Alps *of* Julia.
2. *The Second is between* Suevia, *and* Bavaria: *The place I do not poine at, because of avoiding the being the original of many evils, and because of the shedding of Bloud.*
3. *The Third is between* Spain *and* France.

He now that shall find these, will be carried in Triumph, and be admired by all: Likewise between Suevia (*or* Scawben) *and* Bavaria, *there are Books which contain no mean and common Artifices, that will offer themselves together with precious Stones and a Carbuncle.*

I will here likewise declare the Age of such as shall find them.

The First will be 31 *years old.*
The Second 50 *years old.*
The Third 28 *years old.*

And these shall be found not long after the exit (or ruine) of the Austrian *Empire, and it shall happen, that in this very same time, a Yellow Lion shall come out of the* North, *which shall be Persecutor of the Eagle, and at length its Conquerour: He shall subject under this Empire all* Europe, *and a part of* Asia *and* Affrica, *and shall profess the good and* Christian Religion, *and shall have many Followers thereof. It shall first of all be a most troublesom work for him to chase away the Claws of the Eagle out of the Empire; but afore this comes to pass, there will arise extreamly great Dissentions, and various Grudges amongst all Men in all Countries; the Inferior will rise against the Superior, so that there will be a great tumult, but yet notwithstanding the Members shall suffer the punishments of their wickedness, and the head abide safe.*

Nor shall here be an end, but there shall be kindled a great fire, which shall turn all into ashes, but the Omnipotent God will be at hand to help his own people, for there shall yet remain a small sparkle of Piety, which will take rooting, and encrease by little and little, and strike a terrour into the plundering Robbers, and make that alive, which seems to be dead. The Enemies and Persecutors of Christ, will call themselves powerful, and every where bring in great Devastations, insomuch that there will seem to be an end of our Actions.

Now whilst the Enemy is placed in the very topmost pitch of fortune, the most Just God, will (by the help of a small company) destroy, and utterly root out the Northern Lion, accompanying him, together with all his Clerks; yet abundance shall be Converted, and believe on his Omnipotence, and in the most Holy Name of God.

When therefore this Lion hath gotten the Eagles Scepter, every body will reverence, and run after his Majesty: He

shall

ſhall be powerful in Deeds and Counſels, and the Subjects that now refuſe him, ſhall receive him with the greateſt joy, and ackowledg him their Superior.

Then muſt the aforeſaid Treaſure 'twixt Suevia *and* Bavaria *be found, which is equivalent to the Riches of twelve Kingdoms, where alſo lies hid, a Carbuncle, as big as an Egg, richer than any price.*

The other Treaſure that lies between Spain *and* France, *is indeed great and potent, but yet it gives place to the former, it ſhall be manifeſted at the entrance of the Lion that comes from the North, and, which ſhall take the Eagle, and then at length ſhall men conſider well what I* Theophraſtus *have been.*

Now when the praiſed Northern Lion hath finiſhed his Courſe, and hath broken the edge of the Eagles Claws, then ſhall Peace and Concord every where ſpeedily and vehemently fly thereunto, but yet he will ſend afore, ſome ſigns and tokens by which it ſhall appear unto us, that the Meſſengers ſent forth ſhall declare the coming of the Lord. There is yet one only thing that I Theophraſtus *do beg at your hands, that ye do not any of you impute unto me the things which I now lay open; foraſmuch as I cannot be againſt the Will of God, which I muſt put in execution in the Nature of things.*

Theſe are thoſe Secrets of Secrets that I was willing to open unto you. This Treaſure far exceeds other Treaſures; my Arts are hidden in that place betwixt Suevia *and* Bavaria, *and they are theſe,* viz. The true Tranſmutation of Metals of a ſhort way: The Univerſal, more than perfect: The *ſo much talk'd of* Aurum Potabile, *and* Philoſophers ſtone: *But he that by the guidance of God has an entrance opened to the finding of them, ſhall there find (beſides other ſtones) a precious Carbuncle, which lies hidden in a little Box cunningly made by Men, and covered over with Gems; the Key of the little Box is in a Golden Coffin, the Golden is put in a Silver one; the Silver one in a Tin one; and it lies in ſuch a place as God hath choſen, or appointed.*

The Omnipotent God will beſtow upon him that finds them his Divine Benediction in all his Affairs, and will give him power to oppreſs all evil, and to draw out good; whereby things neceſſary may likewiſe be obtained from God who is able again to reduce the world he made of nothing, into a nothing: Let the Son and Holy Spirit be alſo with us, the Bleſſed Trinity, for ever and ever. Amen.

Firſt of all, *Paracelſus* ſaith in this his Propheſie, that Men ſhall draw him out of his Grave, and place him towards the Eaſt; who is ſo ſimple as to think that this is to be underſtood according to the Letter? What Profit and Honour would thence ariſe to *Paracelſus*, if his Bones were digg'd forth, and tranſlated into another place? Whereas if he were even now living, he could not deſire a better and more excellent Tomb, than that he lies in. Whilſt he was living, he was not ſo proud; he very well knew that the Honours of this World are fading and vain. Nor did he ever require, that any Epitaph ſhould be erected to his Honour: Although (when his Friends had taken care to lay him in a decent place.) The Magiſtrate commanded a very notable Epitaph to be engraven on his Tomb-ſtone for a Teſtimonial of his Deeds, the which Epitaph will bring him Praiſe enough while the World laſts. The ſaid Epitaph runs thus.

The Epitaph of Theophraſtus Paracelſus; *which is to be ſeen Engraved on a Stone at* Saltzburg, *in the Hoſpital of St.* Sebaſtian, *erected againſt the Wall of the Church.*

HEre lies Buried *Philippus Theophraſtus*, an Eminent Doctor of Phyſick: Who by a Wonderful Art, took away thoſe Dire Maladies, the *Leproſie*, *Gout*, *Dropſie*, and other the Incurable Diſeaſes of the Body; and Honourably Diſtributed, and gave his Goods unto the Poor. He Died the 24*th.* Day of *September*, *Anno* 1541.

How could he be poſſibly more praiſed after his Death, than I ſee to be done by this Epitaph. But yet I would not have you think that I deſire you to account of my Opinion as if it were Goſpel. It pleaſed me here to put it for this end, to ſhew, what my thoughts are, as concerning this thing, every one may believe as liſteth him, but as for my part I will in no caſe believe, that the Prediction is to be explained according to the Words or Letter: But whereas it is ſaid, that he ſhall be taken out of his Sepulchre, and put in another towards the Eaſt, I do thus interpret it: That if any ſhall underſtand his Writings, they ſhall thencefrom perceive what, and how great a one he was, and ſo will make his Cauſe their own, and will defend his Writings againſt Inimicitious Zoiliſts (or Carpers) and Ignorants, who as well ſince his Death, as whilſt he was alive, entreated him very inhumanly, and as it were, oppreſſed him with Lies, and Infamous Libels, and ſo do they take him as it were out of his obſcure Tomb, and place him towards the Eaſt, by which it may appear to every one what an incomparable Man he was; to the performance of which, I will not refuſe to lend my poor help, though ſmall, (God permitting.)

He doth afterwards add, that there are three great Treaſures hidden, which whoever ſhall find, ſhall triumph very nobly; the places which *Paracelſus* points at, and where thoſe Treaſures are hidden, are, where the Metals are digged; and indeed ſuch places they are, as in which there lies hidden the higheſt Tincture, and which otherwiſe is not to be found neither in Gold, nor Silver, nor in all the other Metals, or Minerals.

I do think that *Paracelſus* knew theſe Minerals, and made a Tincture of them, and thereupon was willing thus obſcurely to deſcribe ſuch Treaſures.

He that ſhall find, that is dig it forth, and ſhall know the way of preparing a Tincture thencefrom ſhall doubtleſly be magnified, eſpecially if he will diſcloſe them unto others.

Now I believe that if theſe Treaſures ſhould be digged out by ſome godly, honeſt, and wiſe Man, (for the finding them is denied unto reprobates) would not hunt after or affect vain Glory, but be contented in

in that he knows it: But it is not convenient to open or discloſe what this *Minera* is, wherein God hath put ſuch a ſingular Tincture, and which he hath hidden from the proud and covetous. But ſeeing that all things reſide in the hands of God, who can give unto his own People that which he denies unto others, I do not at all fear any one's exhauſting ſo eaſily a Treaſure lying ſo profoundly hidden, although I ſhould make known this ſubject.

Thus much I have experienced, that there lies in them a much more excellent Tincture than in the other Metals or Minerals, but I do not boaſt that I have thence drawn the univerſal Tincture and made it fix, for time and occaſion would not as yet permit it. But I have often times in a particular way inſtituted a graduation of *Luna*, by the help thereof, inſomuch that it hath left ſome fix'd *Sol*: Whereby I have obſerved, that many excellent and profitable things may be effected, when that volatile Tincture is by the rule of Art made fix'd and fluid. However I will make trial, if God ſhall vouchſafe me life and ſtrength, and ſee what I ſhall thence obtain.

As concerning the name of the ſubject, it is called *Magneſia Saturnina*: which is found between *France* and *Spain* in the *Piedmont* Mountains; 'its commonly called the *Piedmont-magneſia*, but 'tis very much unlike (to one another) for ſome of it is of a yellow colour, and this the *Venetian* Glaſs-men uſe, when they make Glaſs, that it may become pellucid and tranſparent. The Glaſs doth at firſt become of a purple or Amethiſt colour, but this colour abides not one hours ſpace in the ſubject, but it evaporates, becauſe it is not fix'd enough as yet, and then the Glaſs becomes wholly tranſparent and bright, but if they would have the Glaſs hold the purple colour, they preſently work it up as ſoon as ever the Magneſia is therein molten. Many years agoe, when I attempted operations about things of leſs moment, and changed Cryſtals into variouſly colour'd Glaſſes, I found that this purple colour was not fix'd in the Fire; and that the Magneſia had in it many impurities, whereby my Glaſſes were obſcured: But yet I attempted to extract from thence the pure Tincture by Art, and to free it from its unclean fæces, and to this end uſed various Menſtruums, but yet effected nothing; until at length I ſaw that by mixing that magneſia with fix'd nitre, it was by boiling them in a ſtrong Crucible, opened by the Nitre, from whence proceeded a delicate purple colour. I poured out the Maſs and powdered it, and extracted it with hot Water, and paſſed the Liquor through a Filter, and then had I a moſt dainty purple fiery liquor, which did almoſt every hour (ſtanding but only in the cold) change colour, ſo that it became one while green, then sky colour, another while of a blood colour of its own accord, then again preſently it received other moſt elegant colours. Out of which liquor I did a-new ſeparate the more pure part, and I uſed this red powder to tinge my Glaſſes, the which thing I indeed obtained, but becauſe the Tincture was more fuſile than the green ſtone it ſelf which it was extracted from I was conſtrained to leave it off. However this I experienced, that there lies a mighty Tincture hidden in the ſaid Magneſia, and thenceforward I pondered upon the buſineſs more deeply, and adjoined the Magneſia thus fuſile unto *Luna*, and then I found ſome *Sol*: but I could not bring the work to any fuller perfection becauſe of the want of time, & ſtore of buſineſs. I am of that opinion that (by Gods permiſſion) a Tincture may thence be extracted for Metals and Animals. Theſe are my conceptions, but I well know, that the ignorant *Momus*, or Carper, will hence take occaſion of mocking at me, but this I cannot at all hinder.

This *Saturnine Magneſia* in the *Alps* of *Julia* is much purer and excellenter than that *Piedmont Magneſia*, is and there is in it more Tincture, the which we may extract moſt eaſily by the help of Nitre, and albeit the *Minera* be of a yellow colour, yet is there extracted thencefrom by the benefit of Salt-petre, a moſt elegant Tincture, of a greeniſh colour, and is likewiſe one while purple; then sky colour, then again red, and by and by again it aſſumes a green colour, the which alſo is ſo fuſile, it fixeth every *Luna*, and doth in ſome ſort make it golden. Theſe two Minerals I have often times handled, and have thencefrom gotten the green Lion, but have not proceeded any farther.

The third Treaſure 'twixt *Suevia* and *Bavaria*, is not much unlike unto theſe two, and without doubt ſuch kind of Treaſures will offer themſelves even in many other places where ſuch Mountains & Mine-pits are found out, were but the right way of digging out and ripenning them, but known unto us; which knowledge is only granted unto the Sons of GOD.

Theſe things was I willing to mention, that ſo it may be known what my opinion is as touching thoſe Treaſures. For I am firmly perſwaded that the univerſal Medicine may be thence prepared, eſpecially out of that which very much abounds ſhining in Metal reſembling a vein of Lead, and yet yields not any Metal by fuſion, bucauſe of its exceeding volatility, and of wholly flying away in the form of a vapour: Yet nevertheleſs, that Northern Lion is able to maſter it and to fatten its young ones thereby. And if GOD ſhall vouchſafe any one ſuch a Treaſure, he will verily find more Art-containing Books than is indeed needful. And whereas *Paracelſus* adds that the Lion out of the North will (after he hath found the aforeſaid Treaſures) become a Potent Monarch, this is eaſie to be believed, for he is enriched with the digged-out Treaſures, and is able to manage his affairs as liſteth him. He will be able to give whole Kingdoms unto others, and yet his power will not be diminiſhed, he will in like manner be able to inſtitute good precepts and government, and there will be a notable affluence of all things, inſomuch that there will be nothing wanting. There are many Men would lead an honeſt Life, were they not conſtrained by poverty and need to do evilly.

The Northern Lion is able (when he hath found the Treaſure to aboliſh all theſe vices, and contrarywiſe recover a good political Governance, Peace and Quietude. For Wealth and Riches are able to tranſmute Strife into Peace, and theſe the Northern Lion can abundantly exhibit, inſomuch that he may deſervedly be Stiled a moſt Potent Monarch. But if ſo be that evil companion, *viz.* Sulphur be joined unto him, which may provoke him, he becomes more venomous than the Baſiliſk, and is able to kill in a moment of time, both Men and Beaſts, yea to ruin Caſtles, Mountains, and Fortifications, and to annihilate them. But on the contrary when he hath found the Treaſure, he becomes tame and liberal, and lays off his anger, and beſtows on all Men ſundry moſt acceptable gifts.

Furthermore, *Paracelſus* ſaith that a yellow Lion ſhall come out of the North, which ſhall dull the Eagles Claws; all which verily is to be only underſtood concerning Salt-petre's tranſmuting virtue much conducing to a perfecter augmentation of the Metals, from whence ☉ and ☽ together with the Carbuncle may be atchieved; and not at all of a certain Northern King and the Roman Eagle. For the yellow and fiery

Lion which is here treated of, is fixt Nitre, and if it be joined to the volatile Eagle, that is, to the volatile Corrosive Salt; this (Eagle) is overcome by that (fixt Salt) and is tamed, because the Corrosive virtue which it abounded withal, is taken away: So that he that is skill'd in Chymistry may well enough understand what *Paracelsus* drives at, and that he does not at all mean those Monarchs and Rulers, as may be gathered out of his Manual, where he Writes, that the Blood of the red Lion is to be commixt with the liquor of the white Eagle, and that from them by a due Coction is the universal Tincture to be extracted.

Therefore they do evilly that interpret the Writings, and these predictions of *Paracelsus* otherwise, they earnestly expect external Monarchs, but experience hath taught that those Lions do bring with them nothing but an hungry Stomach, which can hardly be well filled (or satisfied) with the Sheep and Lambs of all Countries. And I pray God, turn them from us and continue unto us Peace and Concord, which is most of all to be wished for.

Moreover *Paracelsus* further saith, that he was constrained to detect this Treasure and hidden secrets, to shew the neareſt way to the description of the Philosophers-stone, which (Stone) whoever finds and knows how to open the Gate, he shall find a Carbuncle as big as an Egg, together with other Gems, which are conserved in a Chest made of Gold and Gems, and this Chest in a Golden Sepulchre, the Golden one in a Silver one, the Silver one in a Tin one, on which the Key is placed.

And now will there be any one so foolish as to interpret this according to the alleaged Words: No certainly unless he be deprived of the light of Nature. It was never heard off, that ever there was any Carbuncle found of the bigness of an Egg: neither the *Roman*, nor *Grecian*, nor *Persian* Monarchs are reported to have had such an one, and from whence then should *Paracelsus* only have the same? All Men therefore see that this Prophecy is not at all to be understood barely according to the Letter. Now in that he calls the universal Medicine a Carbuncle, he does not therein offend, because even other Philosophers have imposed upon their Tincture this very name, and this meerly because of the form it has, for if there is to be a certain Tincture that should tinge the white Metals into yellow *Sol*, it must of necessity be red; and therefore some of the Philosophers have likewise called their Tincture *Hæmatitis*, for likeness sake.

Nay more, forasmuch as it is mentioned of the Carbuncle that it shines in the night like a burning live-Coal, and yet such a stone was never any where seen or found, it necessarily follows that those things which are delivered thereof are not to be understood according to the Letter. The chiefest *Lapidaries* do Witness that they never saw it; the Oriental Rubies are the chiefest red Gems that we know of, of which there is scarce one found that is bigger than ones nail, which notwithstanding, if it be pure and shining, is sold for many Thousands of Duckets. In like manner, Granates are red, and of a meaner price, and shine no more in the Night than Rubies do. But that a shining in the Night like a live-Coal, should be attributed to a Carbuncle, is not done without cause; verily, the Authors of that thing are not at all to be supposed to be such Merchants, continually handling Gems, (as if they had ever seen such a stone): No, but they were the Philosophers themselves, whose words which they wrote of the prepared Tincture, the after Writers did falsly construe their meaning and understood it literally, perswading themselves that there was such a Carbuncle in the nature of things. Therefore we have no reason to induce us to believe that the ancient Philosophers did in very deed describe or mean such a Stone as shines by night, but let us rather perswade our selves as being thereto constrained by the Verity of the thing, that they did not in the least mean a natural stone, but a stone prepared by Art, and their Tincture. And this, the very Name it self seems to point out; for *Carbo* signifies a greater Coal; and *Carbunculus* signifies a little, or lesser Coal.

Now if so be that any one would endeavour to prove with Oaths to this blind, proud, and wicked World, that such a red stone shining by night, may be made of a Wood, or stone Coal, certainly every body would mock at him, and would say, That he propoundeth meer Lyes; and therefore no body ever dared (though he were never so certain of the Truth of the thing) to write ought of the same.

But some or other will say, Whence come you to know these things, and by what Notes or Testimonies do you prove that you are to be credited, as touching this Business, seeing no body ever writ that these things were so? To such an one I answer, That I leave every one at his liberty; for whether he believes my Sayings, or believes them not, 'tis all a case to me. However I say, that I can change by melting, a meer black Coal by the help of a Salt (but not common Salt) into a most red stone in one hours space. For Coals are nothing else but a fixt and volatile Sulphur, which if we will fix it, will be fixt; if we will volatilize it, it will be so. A wood Char-coal (though there's much difference amongst them) should it lie shut up firmly & most tight in an Iron Vessel even for an hundred Years so as that no air get in, and should be (all that while) kept in a most vehement fire, yet would it not shew the least sign of being consumed or changed, but let but the air come unto it, and it will be reduced into ashes in a moment. If now you have understanding and sense, consider with your self more largely as touching this thing, and you will find many profitable and good things if GOD shall open unto you the Eyes of your mind: This red stone having the form of Glass, being poured out of the Crucible, shines in the dark like a burning Coal, according as is the Coal you prepare it of. And albeit that this Glass can perform many good things in Medicine and Alchimy, yet it is not at all the Stone of the Philosophers, which they call a Carbuncle, for that must be fixt, and resist the Fire, both which are denied to this Glass to be, for it is volatile, and can easily be changed by the Fires force.

I have several times made this stone of Salt and a Coal, but never had time as yet to bring it to a perfect fixation, and therefore I cannot determine certainly, what may be farther hereof made. However I would not have the lover of the wonders of GOD to be unacquainted with this, that (*viz.*) my said Stone of a Coal, or my red Carbuncle, if it be dissolved in the air, it yields a green fiery Liquor, which if smeared upon any Silver it gilds it as Sulphur does. If the Divine Clemency shall supply me with life and strength and that my enemies, and opportunity shall permit, I will some time or other set about the work of fixation, that so it may appear what is thence to be hoped for.

And now friendly Reader who art not addicted to either party tell me, whether or no there does not re-

dound

dound unto thee more light from this most brief treating of the Carbuncle, than from the obscure *Lucerna* or Candle of I. H. S. in whose Book there are indeed the names of a many Authors cited, but none of their Writings are explained, and therefore it is rather a bringing others into a Labyrinth, than a showing of the true way.

Paracelsus adds, that this Carbuncle is hid in a little Chest made of Gold and Gems, this Chest in a Golden Coffin (or Tomb), this in a Silver one, and finally this Silvery one in a Tin one; which sayings verily are to be taken or understood in a far other sence than they are uttered, as well as the words foregoing: For to what end should there be such a multitude and variety of Coffins? My opinion hereabouts is this: Forasmuch as there lies in Tin (as *Paracelsus* testifies in his Book of *Vexations*, when he saith, that *Jupiter* has much Gold in it, and not a little Silver) a spiritual Gold and Silver hidden, and that ☽ contains ☉, and ☉ contains Tincture, we are to understand these things of them, they being as so many Coffins.

But some may say, to what use serve the Tin and Silver, if they are to be removed afore we can come to the Golden Coffin, and get to that which contains the Carbuncle, may we not presently even at first dash seek such a stone in ☉, and leave Tin and ☽ untoucht? I could most easily satisfie such an objection, and give a sufficient reason of *Paracelsus* his Writing such things, but that I judge it inconvenient to communicate such things of so great a consideration (or moment) to wicked Zoilists or Carpers.

However I cannot here let this slip, *viz.* that there lies hid in ☿ an excellent Mercurial Liquor, which is thence extractable by the benefit of that Key which lies upon the Sepulchre or Tomb, *viz.* by the benefit of Salt-petre. This mercurial Liquor, loosens the bonds of ☽, and makes it fit, so as to be extracted (or made into the best ☉), out of which the Carbuncle is to be afterwards made, for every (kind of) ☉ doth not at all resemble the nature of a seed, but supplies the place only of an House or covering, which containeth seed in it, and which (covering) must of necessity be removed by him who desires the seed it self.

I have in other places shown how properly the metalline stock or nature may be compared to a Vegetable Apple: *Saturn* is the root of the Tree; *Mars* the Trunk or Body; *Jupiter* the Bark of the Trunk; *Mercury* the Juice contained betwixt the Bark and the Trunk; *Venus* the green Leaves; *Luna* the white Flower or Blossom; *Sol* the Fruit or Apple of the Tree containing the seed of the Vegetable.

Now then, even as it is a thing evident to all, that the Apple it self is not the seed of the Tree, but the Nut or Kernel is hidden in its inward part, so that the Apple doth only keep or hold in it the seed; even so in like manner ☉ is not at all to be accompted as the seed of Metal, but only as a preserver (and coverer over) of the seed. He now that lights on the true Key, which *Paracelsus* hath put upon the Golden Coffin, (*viz.*) the inside of Salt-nitre, he will be able to open, not only the Tin Coffin, but the Silver and Gold Coffin too, and to take that Coffin thereout of, which contains the Carbuncle and other Gems.

These are the things I was willing to publish according to my opinion, concerning that great Carbuncle lying so deeply hidden in those Coffins: I permit others to expound them otherwise, for I do not offer these things to the old Men who stiffly contend for their own conceptions as it were for the best thing they have, it being an hard matter to tame an old dog; but I present them to such only as are the younger students of the true Hermetick Physick or Medicine, and who are not already drawn into various errors by the reading of many Authors. And he that refuseth to believe that even the greatest *Arcana* may be handled or treated of in a meer simple or plain Stile, and that they need not at all any prolixity, shall never attain his wish'd for end, though he were able to recite by heart even all the Philosophers Books. And thus much may suffice in this place.

Lastly, *Paracelsus* adds at the end of the Prophecy, that the most Great and Blessed GOD will grant to the finder out of these Treasures notable Power and Fortitude, whereby he may oppress all evils, detect good things, and get every profitable thing, certainly whoever he be that shall find such an universal Treasure, he will labour to suppress every noxious thing, and to disclose (on the other hand) whatsoever is any ways profitable for man-kind, and necessary, and this to the very utmost of his power. For the Philosophers say, *Our Art doth either find a Man honest and godly, or it even makes him such an one*; that is, it is altogether impossible for such an one that lights on such Treasures to be an ungodly Man, so, as for those highly precious gifts of God not to stir him up to godliness and Mercy.

I could render this Prophecy of *Paracelsus* more clear, but that I study to be brief, and could manifestly prove, that it is not to be understood according to the bare Letter, but that *Paracelsus* had regard to this great universal of the Philosophers, which is clearly enough hinted in these words which are mentioned at the end of the said Prophecy, *viz.* *That all evils may be kept under, (or abolished) and that all good things may be drawn forth or advanced, and withal, all necessary and useful things may be gotten.* These words do openly enough point at the universal Treasure of the Philosophers, by which all evil is kept under, and all good educed, and all necessary and profitable things acquired. On this wise are my Conceptions of them, let another interpret them according as seems him good. For when the Lion shall have found the said mineral Treasure, he will be incited or stirred up to such a great passionate wrath and power, that is able easily to dull the edge of the Eagles Claws, that is, his adversaries. 'Tis impossible for the Eagle to get such a Treasure, but a thing most easie to the Lion; For there is not a subject in all nature that can make the Lion so fiery and powerful as the *magnesia Saturnina* can, and therefore it easily tames all Corrosives, and cuts off their Claws. Experience confirms the things I here mention, and therefore I will say no more: Yet however I think it expedient to add this one thing more of the nature and properties of the Lion and Eagle.

It is sufficiently manifest, that the Eagle is called the King of all Birds, and the Lion the King of all four-footed Beasts. Not, as if the Eagle were the greatest amongst the Birds, and the Lion the strongest and greatest Animal amongst the Beasts: No, no, There are bigger Birds and Beasts than the Eagle or the Lion; Geese, Swans, and our Country Storks are bigger than an Eagle, (I omit to speak of the other huge Birds in *Asia*, *Africa*, &c. Amongst which the Ostrich is reckoned for one, which is as big almost as a Horse, and runs swifter than a Horse.) Then, for Beasts, there are some of the (like proportionable stature) as the Rhinoceros and Elephant, which fear the Lion no more than the Ostrich and other (great) Birds do the Eagle; yet nevertheless do they acknowledge

knowledge the Lion and Eagle for King, and that deservedly too, because of the Velocity, strength, valour, and other virtues that those Creatures have.

But yet Historians rank the Griffin and Dragon amongst the Birds and the greatest Animals. They paint (or describe) the Griffin, a winged Animal, one half part resembling a Lion, the other half part an Eagle; the Claws, Wings and Head like an Eagles, the other part of the body like a Lions. But this is a Philosophical and Poetical Fable, by which they would disclose and lay open other Mysteries and Arcana's. For there is never to be found in all this whole compass (of the World) such a Dragon as flies in the Air or spits out Fire; but all these sayings, point at Salt-petre. They likewise feign the Griffin to be of such power as to be able to carry away through the air an armed Souldier on Horse-back; these and greater things than these can Salt-petre do; for 'tis able to blow up whole Castles and Fortresses with many myriades of Men into the air; and would to God this were not so well known. The Philosophers have only shadowed out their Dragon amongst other Birds. Our Dragon never dies but by the help of his Brother and Sister, that is of the fixt Lion, and corrosive fluid Eagle, the which thing may be likewise said of the Griffins. For of the fixt burning Lion, and fluxil or fluid corrosive Eagle, there is created no other thing but a Griffin, part Eagle and part Lion, which lifts (or blows) up Mountains of most vast weight; when they fight each with the other they kill one another and are raised up again out of the dead Carkass. And thus there are regenerated (or again born) other Lions and other Eagles out of the Griffin, and (if you are so minded) both the Lion and also the Eagle may be fed and fatted with the common Flesh of other Wild Beasts, so as thence forward they may generate innumerable Griffins, which you may use not only in time of War against the Enemies, but also in the Mountains, to dig out Treasures thence, and being digged to carry them into the Nest.

N B. It is reported of the Griffin that he gathers much Gold which he carries with him into his Nest; But all these things are to be understood of the strength and virtues of Salt-petre; concerning which I could be much more prolix and more clear were I not even constrained to over-pass it and let it alone because of the ungodly crew of wicked men.

And now let us enter with the Philosopher *Virgil*, into the dark Cave or Den of the *Sybill*, and let us see whether or no we can find the Book there (that is Salt-petre) wherein are found all the secrets of nature: Or rather, let us enter into the Stable with the three wise Men or Kings that came from the East, and let us there seek the Son that was born of a Virgin, who is the King of the World & the King of all Kings, and let us apparel or adorn him with due gifts or presents, that his age & strength may grow up and be augmented, & he may at length drive away the Diseases of his three brethren, *viz.* of the Vegetable, Animal, and Mineral. This Infant needs not Gold, Myrrh, and Franckincense for his sustentation, but we will bestow upon him instead of Gold Myrrh, and Franckincense, three other things for multiplications sake; common Sulphur shall supply the room of Gold; common Salt, of Myrrh; the external green boughs of Firr or Elder, of Franckincense; thereof will we make his Bed, and these shall be his coverings.

The Salt which is animated by the Sulphur and converted into Milk shall be his food, so long until he becomes great and strong enough, yea a Potent Monarch, and then will he gainfully reward his Tutor (or Guardian) *Joseph*, for his laborious Wardship.

The Magi and Philosophers observed the Star of our Infant, which shineth so brightly as that it dazles the sight of the beholder; nor can any one look long upon it without hurting his sight, and thereupon it is worthily called the Son of the ☉: For there is not any clear or bright light without the Sun, the Country fellows therefore do not perceive such a light, but the Chymists can (whensoever pleaseth them) make and see such a light.

The things which I here declare concerning the nativity of Salt-petre, are most easie to be understood. It is generated or born in the Stables, The ☉ is its Father, the ☽ is its Mother, the Wind conveys the Paternal seed in a spiritual manner, into the moist Earth of the Stable, by which, the Virgin Earth being impregnated doth after due time produce its young to light.

N B. That Earth which produceth and conserves Herbs, Grass, and Metals is called the Mother; and that Earth which doth not produce (as in Stables, &c.) is as yet to be accompted as a Virgin, which doth afterwards yield so noble an offspring. No Earth out of which, Herbs, Trees, and Minerals are born doth ever conceive again, or ever intermits the production of such things, and for that reason is it called the Mother of all things. But now that Earth that is found in Stables, which conceives neither the *Solar* nor *Lunar* beams, nor is moistned with either Rain or Dew, cannot produce any thing, unless the beams are conveyed thereinto from the Sun by the Air, then the impregnated Virgin in the Stables, brings forth an offspring, which is by the Philosophers presented for its sustentation, with a threefold kind of gifts; to wit, Sulphur instead of Gold, and that being in like manner fixt and most pure; with Salt instead of Myrrh, which is pure and preservative, and with the Juice or Resin of the Firr-tree, or Elder, instead of sweet smelling Franckincense. These three things are the Aliment or food of the new Infant; The Green Boughs of the Firr or Elder, do furnish him with a Bed for his Cradle; The Sulphur and Salt yield him sweet milk to nourish him; so that there needs not any thing else but a good overseer, *Joseph*, that may keep off the Rain and the cold Air from this Infants Bed.

By such a means as this may we nourish our most tender Infant and advance him to his Kingly Monarchy; when he shall arrive thither he can make all his Brethren sound and rich: For the Vegetables do only desire profitable and convenient food, or some fat earth, whereby they (being well and sound) may attain to their perfection and encrease themselves; which thing Salt-petre does better than any other.

Nor do the Minerals desire ought else but that the impurity and superfluous Sulphur be taken away from them, that so they may (after a perfect Purification) cast forth their seed, that is Gold; and this, Salt-petre does most perfectly. Then Lastly, the Animals seek not after other food than what the Earth supplies them withal, which to effect, Salt-petre must of necessity be at hand.

Salt-petre therefore is the only preserver of all Vegetables Minerals and Animals, but the soul of Man doth not at all belong thereunto, for it is the propriety of Jesus Christ; but as for the bodies, Salt-petre is the most profitable medicament. Whatsoever I have here produced in this place, I have already Written the same in other places of my Treatises, in another kind

kind of manner and expreſſion, and therefore I ſuppoſe it to be plainly needleſs to make any farther addition: He that will not be able to light his dark Candle at this ſhining light, will be blind all his life time, and conſequently incurable.

As concerning the preparation of Sulphur with Salt, how it is to be made a *Lac Virginis* I have already mentioned it abundantly in many places. And as for the making of the Cradle or Bed, and what form 'tis of I ſhewed about the beginning of this Work: So that now there remains nothing behind but the applying the hands to the work, if we deſire to get honour and goods from (this) principal Monarch.

Salt-petre is the only Artificer to reduce Metals unto their firſt matter, or of making them Aſtral. For the Stars are nothing elſe but pure fire. They exerciſe fiery Operations, and produce fiery things; like as the Vegetables do putrefy by the Salt-petre in the Dung, and are reduced unto perfection and multiplication, without which putrefying there can never be made any multiplication of the Vegetables, as Chriſt himſelf witneſſeth; if the Wheat does (not) putrefy in the Earth it can produce no fruits. The like is in the Animals too, yet eſpecially in the Eggs of Birds, which ſaid Eggs muſt ſtink and rot afore the hatching of the Chicken comes. Therefore in vain have many tried ſo to deſile (or putrefy) Metals and reduce them to their firſt matter. Now though the Philoſophers tell us that Metals are to be firſt putrefied afore they can be multiplied, yet they meant not ſuch a putrefaction, but the putrefaction of Metals muſt be done by the help of fire, and withal muſt be ſo effected by Artificers, here below, as the Metals are wrought by the Stars in the Heaven, for we muſt imitate Nature. And forasmuch as nature generates all Metals by a Celeſtial Fire, therefore the Artiſt muſt go no other way, but muſt imitate nature if he would do any good on't.

As for Vegetables and Animals, we willingly allow them a moiſt putrefaction, but for the Metals, a dry and fiery putrefaction ſuits with them, and which may be perfected in two or three hours ſpace, as may be ſeen in my *Continuation of Miraculum Mundi*, and in (my) *Teſtimony of the Truth*, [or *Explication of Miraculum Mundi*:] And this is the only cauſe (or rock) againſt which many have fallen, and ſo have not gotten any good thing, (or profitable.) Now, afore putrefaction it cannot be enceaſed; and every thing which induceth a putrefaction into other things muſt of neceſſity conſiſt of two contraries in its nature: Water poured upon Water remains Water, and there is no change wrought; but from Fire and Water do many wonderful things proceed. If we pour the corroſive Spirit of Nitre, of Salt or Vitriol upon another corroſive Spirit, they eaſily embrace each other and are commixt without noiſe, and there is not thence generated any new thing, but it always remains an acid corroſive Spirit. If we put one ſtrong Lixivium to another like Lixivium, there is no noiſe (or hiſſing) ſtirred up, nor any change made; but now if we mix that ſame Lixivium with a corroſive Spirit the one operates upon the other, being both contraries, and there is generated of them both ſomewhat of a middle nature, which has not the likeneſs of either. This now is clearly evident in ſtrong fixt Nitre, or any other Lixivium of Wood, when it is poured into *Aqua-fortis*, and they act one upon the other; then of them both, there proceedeth a certain middle thing, *viz.* burning Salt-petre, which brings all things to putrefaction, and promotes or advanceth their multiplication, the which thing is after a ſort known in the Vegetables, and Animals; but as for the Metals, the Philoſophers have accompted it as a ſecret even to this very day; and therefore hence comes it to paſs that there hath been ſo much erring in putrefaction (which is the very key of the Art) and nothing hath hitherto been brought unto the wiſh'd for end.

Foraſmuch therefore as Metals ought to be putrefied by the Fire, we do not find any thing more commodious than Salt-petre, which in one hours ſpace, putrefieth all the Metals prepared aforehand, and multiplies them, *viz.* when a commodious and moiſt Matrix is put into the Fire, wherein (a man) may put his (metalline) ſeed to be therein multiplied; for ſeed is not multiplied without a Matrix, and this is daily obſervable in the Vegetables and Animals.

Now, as a Vegetable ſeed needeth for its multiplication a fat and moiſt Earth, and an Animal Matrix; ſo likewiſe the ſeed of Metals needs a metalline Matrix, without which it cannot be multiplied: And by how much the more apt and commodious the Matrix is, ſo much the more noble is the Fruit, and ſo on the contrary.

So then, by this time all men know that by how much the ſtronger and better the contraries be, ſo much the better are the fruits, as hath been already ſaid. The ſtronger the *Aqua-fortis* is, and the more fixt the Salt or Lee is, that are mixt together, the better and the more plenty of Salt-petre is there generated. But eſpecially if we concentrate corroſive Spirits by Metals & do make them (thereby) yet more corroſive, as alſo if we concentrate fixt Salts by Flints, and ſo make them yet more fiery, they do then perform many wonderful Operations. For whereas the bare contraries do yield but only Salts; being concentrated, they do yield forth fruits that break out as if it were Trees: Concerning which you may ſee in the ſecond part of the Furnaces, about the Liquor of Flints. This is that which we ſee and believe, *viz.* that by how much the more the contraries are contrary to each other, ſo much the greater product is there of Fruits. But becauſe Fire and Water are naturally exceeding contrary to each other, therefore do they alſo produce the greater fruits, *viz.* Metals, which are greater than either the Vegetables or Animals are.

N B. If the Artiſt can think upon a yet hotter Fire than the common Fire is, and a colder Water (than uſual) and know where to find them, ſuch will of neceſſity likewiſe produce Metals that are more excellent than the Vulgar.

But ſeeing that amongſt all the fires there is not given a hotter than Salt-petre, a cold wife is to be aſſociated unto him, and the wedding is to be celebrated in Hell, then will both of them leave (behind them) Sons of Riches and Health.

'Tis an uſual cuſtom throughout all *Germany*, haply other Kingdoms have the like, that when two contract Matrimony, the Bridgroom and the Bride, are led into the bathes two or three days afore the Wedding is Celebrated, and they are there waſh'd, to the end that they may be the more acceptable to each other: And although they put on their beſt apparel and do adorn themſelves with moſt clean dreſſings, yet do they at laſt put off all their fine Ornaments when they deſire to conjoin themſelves and multiply.

The ſame is here to be underſtood of the new metallick multiplication: If each party be but only ſound & of a good conſtitution (though the outward raiment be vile) yet are they able to beget as fair Children, as Royal Perſons, (who are loaden with Gold, Silver,

precious Stones, and Pearls,) can. Hence it is apparent, that the Garments contribute nothing to the buſineſs, but that the multiplication doth ſolely depend upon the ſoundneſs and good conſtitution of the bodies; and this *Pythagoras* well knew, and willingly left it to poſterity, for he obſerved that the ſoul of the Metals being by Art forced out of the body did preſently paſs into the nigheſt bodies and after their death, again into the next: Hence it was, that he fell into a great errour, when he concluded, that the ſame was alſo true as to the tranſmigration of the ſoul of man, and the order therein the ſame; to wit, that the ſoul of one man did not preſently paſs into another man, but as well into Sheep, Birds, Fiſhes, *&c.* And for that reaſon, his ſucceſſours, (a great part of whom inhabit *Africk*) will not to this day kill ſo much as a little Worm, fearing leaſt that they ſhould kill ſuch an Animal, as contains in it the ſoul of their Father or Mother. Beſides too, he ſignified that the ſoul of a man was better and more pleaſant in Frogs than in the moſt Potent King. Without doubt this errour aroſe from hence, *viz.* his ſeeing the ſouls of Metals that are forced out of their bodies, to occupy or poſſeſs the neareſt and more commodious ſubjects. By how much the purer the Subject is that the ſoul of Metals finds or lights on in its departure (or going off from the Metals) the willinglier doth it poſſeſs it. We Chriſtians have a more perfect knowledge of the ſoul given us than was given *Pythagoras*, but if we ſpeak of Metals, then this ſaying of *Pythagoras* hath good foundation, which thing, no experienced Philoſopher will ever be able to gain-ſay or confute with truth. This we know moſt certainly, that God doth eſteem the ſoul of a beggar as much as of a King; the bodies do indeed make the difference for ſome bodies are better adorned than other ſome. Likewiſe, the noble and not adulterated Alchimy teacheth us that the ſoul of ♂ or ♀ is as good as the ſoul of ☉ is; herein is the difference between them, that their bodies are bigger and ſtronger, and ſo their noble ſoul is contemned and rejected by the ignorant, becauſe of the rude groſſneſs of their bodies. Hereupon, the curious ſearchers of nature have laboured to deſtroy thoſe groſs bodies, and to draw out their pure ſoul, that they might tranſlate it into better and purer bodies, (the which thing alſo ſucceeded according to their deſire) and by the extracted ſouls they tranſmuted the imperfect aud impure bodies of the Metals into moſt pure Gold: Nor were they ignorant of the Artifice of particularly purifying the groſs and impure bodies of the Metals, like as the ſick bodies of men being purified by the virtue and help of medicaments are reſtored to their former health and vigour. For when an impure Patient meets with an expert Phyſician whom he (*viz.* the Phyſician) undertakes to cure, he doth firſt of all (if his Patient haps to have the *Itch*, *Scabs*, the *Scurvy*, *Lues Venerea*, *Puſtules* and other ſtinking ſores) preſcribe him a purge whereby all the impurities may be firſt expelled. Then he permits the ſick perſon to uſe a ſweating-houſe, or ſtove, in which he may ſweat ſo much as to be very much debilitated by the heat. Laſtly, he brings him into a Parlour or Chamber that has a pure air in it, to refreſh him, and therein he manageth the cure of him, until he hath recovered his former health and purity; and if the ſick be not made clean or pure by the firſt purgation and ſweating, he reiterates the ſame remedies as often as need ſhall require, and till the ſick be perfectly freed from impurities.

Juſt ſo, doth the skilful Chymiſt proceed in the purification of the imperfect Metals, for he expels all the excrements which they are in an eſpecial manner endued (or ſoil'd) withal, *viz.* the impure and ſtinking Sulphur by the help of the fire, and by the help of little appropriated ſtoves (or pots) even until they get their due purity; Art therefore imitates Art. But if ſo be that all Phyſicians were skill'd in Alchimy and Aſtronomy we ſhould not need ſuch plenty of Coffins, for in them (*viz.* Alchimy and Aſtronomy) one true Art doth continually produce out of it ſelf another.

The Aſtronomer when he would give a man his judgment as to the manner and term of his life, doth firſt of all look to the hour of the nativity, and fiſheth out what condition that aſpect is of, that doth at that time bear chief rule in the Firmament, which when he hath found out he doth by the means of calculation, predict what good or what evil things will befal the Child (or party) whileſt he lives.

Although theſe prognoſtications are not at all Infallible, yet are they not therefore by any means to be totally rejected. For we oftentimes find many things true by experience which otherwiſe we would not credit: Nor is it ſo much without reaſon that we ſo eſteem them, but this ought not to be done compulſively (or, as if they forced us) for 'tis the uſual Proverb, *The Stars incline, but do not neceſſitate.* For like as a man that is born under an evil aſpect may by doctrine and information be made good, ſo that here the aſpects may be of no moment; ſo on the other hand, we often find that ſtuh an one as is born under a moſt excellent aſpect is corrupted and depraved by his converſation with evil men. And theſe very things doth even Alchimy demonſtrate the truth of: For even as ſoon as ever the Infant is born & begins to ſuck in the air, he doth even then attract ſuch influences (according to the opinion of Aſtronomers) as the Stars do that very hour emit from themſelves upon the inferiour bodies (or things here below,) and ſo conſequently he imitates the nature of theſe: Even ſo the new born Metallick Infant, doth in the moment of his birth attract a metallick Aſtrum or Conſtellation, like to that which did at that time bear the chief ſway, and ſo conſequently receiveth qualities like the qualities of this Star or Aſtrum. And although that the metallick Infant were made a partaker of a good Star (or aſpect) the firſt time of its nativity, yet notwithſtanding it may be accidentally infected afterwards, ſo as thence to become an evil Metal: And on the other hand, that which was bad at the firſt may be reduced to that paſs by Art and a convenient diſcipline of the fire, as that the beſt Metal may thencefrom proceed, and this, experience witneſſeth every day, nor can it be denied by any but ſuch from whom the light of nature lies hidden.

If now the ſuperior Stars can exerciſe ſuch great virtues, what hinders but that the inferiour ones may exerciſe the ſame if not greater, provided we but rightly govern and tame them. The ſuperiour Stars are not at all ſubject unto our power, they are ſubmitted or put under God's guidance only. But the inferiour ones may be handled by us according to our pleaſure. The Phyſician may apply them to Medicine, the Chymiſt may apply them to Alchimy. He then to whom the knowledge of uſing the inferiour Aſtrums aright, is granted, may uſe them with moſt great honour, and eminent benefit, whether he be a Phyſician or a Chymiſt, which (ſaid Aſtrums) others are conſtrained to leave untouch'd to their great diſgrace and loſs. But men now adays are too much given to lazineſs and ſloath, ſo that there are but few to be found that will ſearch after nature's Secrets. A many there are that chal-

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lenge to themselves the title of learned Philosophers and yet are altogether ignorant of the foundations of true Philosophy. There is not in this age scarce any esteem at all, of true Philosophers, though notwithstanding they deal with us so sincerely and do clearly set afore our Eyes, the interiours of nature, and leave us excellent Writings. So *Pythagoras* whom we mentioned afore did upon this accompt suppose, that, (because he saw the souls of Metals to be carried out of one body into another, and to Operate as well in this body as in the other former, and consequently to animate this, and make it more perfect,) the case was the very same with the human soul; and by this means he directed as it were his successours to the universal and particular work of Metals.

And even just after the same manner hath *Virgil* done, when he would that his Carcass should be cut into pieces, and be reduced unto a Life by a continual instillation (or dropping in) of burning Oil. Perhaps the occasion of his falling into those cogitations was this, either because he observed that the dead metallick bodies were by the operation of the Fire, and addition again animated, and so he perswaded himself that the like might possibly be done in man; or that well knowing the impossibility of doing this thing he would give an occasion to such as came after, more curiously to search, and so was willing to point out with his Fingers as it were at the multiplication and propogation of the metallick bodies (as *Pythgoras*, of the souls.)

Most certain it is, that it will not be any difficulty to him that knows Nitre aright, and can so order it as to operate in metalline bodies in the form of fire, to multiply *Sol* (in an universal way) and to make the viler Metals more perfect (in a particular way.) And this I was willing here to add. 'Tis well for him that useth the gifts granted him by God, to his glory and the benefit his neighbour.

And thus much may suffice to have been spoken in this place concerning the nativity and multiplication of Salt-petre, and the Potent Monarchy; more shall be spoken upon some other occasion if God please.

Now follows the use and benefit of Salt-petre.

HAving thus shown the Generation of Salt-petre out of every Kingdom, *viz.* of the Vegetable, Animal, and Mineral Kingdom; it now remains yet, briefly to shew what wonderful things the same doth effect in Medicine and Alchimy, which thing we do not find that ever any one of the Philosophers did perform, but kept all to themselves for secrets.

Forasmuch therefore as I have made a beginning of the thing already in the second part of this Book, where I spake of a certain moist separation; that is, I there delivered that it is possible to extract Gold and Silver out of all (yea even the most vile) Metals, by the benefit of a nitrous Water, so as that any one that will but set his hand to the work may thence get his sustenance most plentifully; it seems a thing necessary to finish what hath been already well begun.

Now forasmuch as I did in that place let pass the describing the manner it self of Extraction, a many Friends have much desired an illustration of the things there spoken, but I could not hitherto by any means satisfie their petition, because that the abundance of my imployments denied me the time of Writing.

Now therefore I have determined both to gratifie these and others by opening this most noble artifice, but yet so, as that I will reserve some things unto my self, that so all things may not be made so common to my Enemies. And if so be that any of my Friends desire a more plain explication, and desire an addion of the things I have omitted here, it will be an easie matter unto me to satisfie their requests.

This Art therefore doth not only conduce to this, *viz.* to extract fixt Gold and Silver out of all sand, earth, stones, yea and out of the more vile Metals (or Ores of Gold and Silver; (but also to extract the volatile and immature Gold, and Silver, and to make it fix, and that in such a compendious manner as that it will be a matter of (in a manner) no costs or labour: Nay more, if so be there cannot be had any poor Metals, Stones, or such like subjects that contain in them Gold and Silver (though even these are plentifully enough to be had in every part of the World): Yet nevertheless may that Art be exercised with profit, about even the imperfect Metals such as ♂, ♀, ♃, ♄, ☿, *Calmei*, *Zink*, *Bismuth*, *Cadmia*, *Arsenick*, *Auripigment*, *Granates*, *Talk*, *Smiris*, *Hematitis*, and such kind of Fossiles, are; and which contain ☉ & ☽, partly fixt, and partly volatile, and may be commodiously extracted by the help of a nitrous Water.

Besides too, most excellent Gold may be in like manner profitably separated out of all such things as are made by Art of Silver, whether they be gilded with Gold, or not, insomuch, that if there be but a most few grains contained in a large portion of Silver, they may be separated with gain. And if so be any be so minded to impregnate the separated ☽ again with Gold, that so it may again yield Gold by a following separation, he may most easily do so; yea, this operation may be so often repeated after this wise until all the ☽ pass (by Graduation) into *Sol*, which thing may be compared to a perpetual durable Mine-pit of Gold, and is perfected by the benefit of Salt-petre only; and therefore it both may and ought to be called and that deservedly a Store-house and comfort for mankind. For when we prepare that Salt-petre of medicinal Subjects, all the Salt-petre doth not put on the form of christals, but much of it abides permixt with the water, whih water doth abound with a most notable nitrous virtue of thoroughly promoting Christallization, insomuch that the seeds of Rye, Wheat, Millet, Oates, Beech-wheat, and such like, when they are macerated or steeped therein some due time, afore they are sown in the Earth, do multiply themselves extraordinarily, so that we see 3, 4, 6, yea and sometimes 20 plants spring forth out of one single Grain.

With the same nitrous Liquor too, (so it be prepared of true medicinal things, may be made a most excellent Medicine (which may be in a manner compared with potable Gold, and by the help of which, great diseases and as it were incurable, are happily healed) and that in a few hours space.

Forasmuch therefore, as such a Kingly medicament (of which I have made some mention in the Second Part of my *Pharmacopœia Spagyrica*, where I treated of nitre) & such a most excellent & incomparable dunging of the Ground, may, together with the Salt-petre, be prepared & instituted; so most easily & almost without cost, (on which depends the health of the body, and fertility of the Ground, whether you respect Corn, or Wine, or Hops, or any other things, that man useth instead of Meat and Drink for the sustaining of Life; or else the extraction of ☉ and ☽ out of all the most abject Subjects every where found) may we not justly pronounce thus much of Salt-petre, that it is altogether profitable and commodious to all men; and

and therefore well worth the ſearching after, and the application to the uſe of Man.

Therefore like as by the help of Salt-petre, we ſee we are able to get all ſuch things as an honeſt man ſeems to need, ſuch as are Food, Drink, Health, yea and ☉ and ☽ too, and all this moſt plentifully and perfectly: ſo on the contrary, the uſe of this Salt-petre is very hurtful when it is uſed for evil, and this is ſufficiently ſeen in the time of War. Yet nevertheleſs we ſhould not eſteem leſs of it than it really is, becauſe of its being abuſed, but rather the benefits attending it (which are very many) ſhould ſtir up our minds to make a diligent enquiry into it. The end of the World is at hand, and ſundry things are detected, which the ancients reſerved amongſt the higheſt Secrets, but they are but little eſteemed; ſome of them, I will here exhibit and ſhow unto you.

Now follows the Proceſs, Operation, or Manner of extracting Sol *and* Luna *out of all the Metals with Profit.*

THat you may gainfully extract ☽ out of the Metal (or Mineral) of Silver, Litharge, ſtones, and the like foſſiles, which have ☽ in them, Firſt of all you muſt commit them to the fire, that they may be made red hot (but yet this needs not be done with ſand) then powder them, and put them in a Glaſs Cucurbite, pour thereupon as much *Aqua-fortis* as is ſufficient, put this Cucurbite in a pan full of ſand, and then heat the ſand by little and little by putting Fire thereunder; that ſo the *Aqua-fortis* may by the help thereof attract the ☽ out of the powder; then pour off the *Aqua-fortis* from this powder, and pour it upon the other like conditioned powder, that it may alſo extract the ☽ out of that too, and this decanting and pouring on, muſt be repeated ſo often until there be no more diſſolved.

The *Aqua-fortis* is always diminiſhed or waſted becauſe ſome of it adheres to the Metal, and therefore muſt there always be other *Aqua-fortis* put in the room of that which is waſted; The *Aqua-fortis* which adheres to the Metal is to be thence ſeparated by the benefit of boiling, on this wiſe; Pour common Rain-water upon the Metal contained in the Cucurbite, and mix it well by ſtrong ſhaking of the Glaſs, then heat the ſand ſo as to make it boil, and ſo that hot water will draw to it ſelf the *Aqua-fortis* out of the Metal, which ſaid water contains ☽ in it. Then when this water is abſtracted by inclination or pouring off, put on ſome Rain-water a ſecond time upon the powdered Metal remaining in the Cucurbite, and this will extract that which the former water left of the *Aqua-fortis* partaking of ☽ (unwaſh'd off:) and ſo let nothing of the ☽ remain in that metallick powder; when it's thus done the matter is to be thrown away as altogether unprofitable, unleſs there lies hid therein any Gold; which if it be ſo, we muſt pour ſome *Aqua-Regia* thereupon, and order the operation according to the foregoing method; then mix both the ſtrong waters together, both that which extracted the ☽ and that which extracted the ☉, mix them diligently, and there will thence ariſe a certain white Water, and the ſolution will be like Milk; For the ☽ cannot abide the *Aqua-Regia*, but there will precipitate a white powder which ſnatcheth (or precipitateth) down with it ſelf out of the Waters the Gold too. We may make uſe of the decanted Water to extract ☉ out of the other Metals; for the pouring on of the *Aqua-fortis* with the ☽ in it, to the *Aqua-Regia*, doth not at all take away ought of the virtues.

Upon the precipitated powder of ☉ and ☽ hot Rain-water is to be ſeveral times poured, that ſo all the ſharpneſs of the *Aqua-fortis* may be extracted. The powder of the ☽ is to be put upon ſome Cap-paper and dried. And as for the way of ſeparating the ☽ from the ☉ we will preſently teach in what follows.

The edulcorating waters as well of ☉ as of ☽, are to be all of them mixt together, and then the ☽ will ſettle to the bottom, and attracts the ☉ which was in the other water (or waſhings): ſo that there remains not any either ☉ or ☽ in the edulcorating Water (or waſhings): nor are theſe waters of any farther profit as to the work of ſeparating as afore, yet notwithſtanding there may be made excellent Salt-petre of them, as we ſhall mention in what follows.

When you have rightly edulcorated and dried the precipitates of ☉ and ☽, they are to be put into a ſtrong Crucible, this Crucible is to be placed in a Gentle fire, until the matter therein contained doth flow, which is eaſily done, for it is very fluxile; as ſoon as ever you perceive it flow, turn it out, for fear leaſt any of it ſhould penetrate the Crucible, and ſo bring damage or loſs to the Operator. When the ☽ is poured forth, you will find the ☉ ſticking to the ſides and bottom of the Crucible like pale Gold, altogether Crude and not at all fluxile. The ☽ turn'd out is brittle, fuſile, and volatile, and is by the Chymiſts call'd Horny-Luna, but I call it the ☿ of ☽, it being of excellent uſe in Alchimy, as ſhall be ſhown in what follows.

The Crucible in which that ☉ remained may be kept to melt ſuch like precipitates of ☉ & ☽ in again; when this hath been done pretty often (in the ſame pot) melt down this ☉ by adding a little borax, and you ſhall receive a paliſh Gold, becauſe in this firſt melting, ſome of the ☽ doth adhere thereunto.

This now is the common way of ſeparating theſe precipitates of ☉ and ☽ from each other, there ſhall follow a better way in what enſues.

NB. That if ſo be, both the Metals are boiled in a ſtrong Lixivium after their edulcoration; or if ſome fixt Salt made of a Lixivium, be powdered and permixt with it afore melting, then the ☉ and ☽ are reduced together, and may be afterwards ſeparated by the help of *Aqua-fortis*: There is yet a more accurate way; (and it is this) when we mix the edulcorated Calxes of *Luna* and *Sol* with (A.) and being mixt put them in a coated Retort, and put fire thereunder by degrees (as is wont to be done in deſtilling) and keep it for 6 or 8 hours in a continual Cementation; and ſo the volatile ☿ of ☽ is made fixt by the help of (A.) and corporeal: Yea and tingeth ſome part of the added (A.) ſo that by the benefit of this Cementation, the ☽ is made more Golden. This Cement is to be moſt finely powdered and to be reduced by the following melting: and you will find your ☉ and ☽ augmented. The melting is thus; Take of the beſt Salt-petre, and (A.) each alike: mix them, and ſeparate the Spirit of Nitre by a Retort, which (Spirit) is much fitter for ſeparation than ſimple *Aqua-fortis*: The *Caput Mortuum* remaining behind in the Retort, is to be powdered, the fixt Nitre is to be extracted with Rain-water out of the powder. This Lixivium or extracting Liquor will be of a green colour which is to be coagulated into a Salt by a due boiling; which Salt is able to reduce the ☿ of ☽; and

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to make aureous or Golden, yea, and to reduce the Cemented ☿ (of ☽ too.

NB. It is better to mix the fixt Salt-petre, or the Green Lyon simply with the horny ☽, to cement it in a Retort, than (to take it) out of the Retort, (and) reduce it with a stronger fire; and so we shall have an excellent augmentation of ☉.

NB. The *Mercury* of *Luna* cemented with (A) may be likewise reduced by this means, (*viz.* with this flux) that we take one part of Flints that will melt in the fire, and of the fixt salt of ashes four or five parts, and so mix them together, and melt them into a white glass; 'tis able to reduce the best Cements. And this is the best way of all of reduction.

Besides, all those ways of reducing a Cement, there may even this way too be instituted, and that not unprofitably. Take of the fusile Glass of Lead four parts, of the cementing Powder one part; melt them in an iron Crucible in a strong Fire, and some of the Lead will be reduced out of the Glass of Lead, and will be near (or partake of) ☽: This Lead is to be blown off on the Test, and you shall find an aureous ☽: But for as much as the Lead separated from the Glass of Lead in the iron Crucible, contracts a blackish colour from the Iron; it is profitable to add to the matter in the fusing or melting, some Salt of Ashes, as being that by which the Lead becomes depurated, and so is easily separated on the Test.

But if so be, that (for this work) the Metals (or Minerals) of ☉ & ☽ cannot be had to precipitate the *Mercury* of ☽ out of them, (then) the artificially-made (vessels or plate) whether simply Silver, or else guilt with ☉, may be made use of; let these be dissolved with the *Aq. For.* left after the precipitation, & precipitated with Salt water or *Aqua Regia*, and be edulcorated and mixt with (A) and be fixt in a Retort. Now this Operation is to be done in a Retort, that so the precipitated ☽ that is altogether volatile, may not be wasted. which in a Crucible evaporates away, a good part of it, which cannot be so done in a Retort; for in a Retort, that which flies up, sticks in the Neck, and may be separated thencefrom, and be mixt with other Cements: And besides too, the Cement is easilyer separated from the Glass, than from an uneven Crucible; for some part always sticks thereon, and cannot be gotten off.

When you are minded to purifie this Cement sooner (or more speedily) it may be molten with an equal weight of Antimony, and there will arise from your golden ☽ a Regulus, which must be purified with Salt-Petre. Concerning which work of Reduction, and which is far easier than that which is done by the help of the Glass of Lead, I have most clearly and fully handled it, in my Testimony of the Truth, or the Explication of my *Miraculum Mundi*. By this means every ☿ of ☽ may be rendred aureous, and that as oft as one will, yea, even until all the ☽ be changed into Gold by Cementation and Gradation. Now if you would otherwise separate ought of the aureous or golden ☽, or extract the Metals (where nevertheless you would reduce the separated ☉ and ☽) it may be effected by this means most commodiously and most gainfully of all, because the Calx of ☽ is made aureous by Cementation. This labour yields a continual augmentation of ☉, by which we may live very well and plentifully.

Another Augment or Encrease of Sol.

DIssolve ☽ or ♄ in *Aqua Fortis*, also ♀ in *Aqua Regia*: (NB. Let there be always thrice as much Silver as Tin;) mix the solutions very accurately, and when you see that all the matter is fallen down (or precipitated) to the bottom; pour off the water, which said water will very commodiously serve instead of *Aqua Regia*, to dissolve other ♀ in. NB. If your *Aqua Regia* be not strong enough, it will not at all dissolve the Tin, therefore in such a Case, you may pour on the Tin, *Aqua Fortis* mixt with simple water, which after they have a while acted upon each other, there must be some salt-water poured thereupon, that so the ☽ or ♄ may be precipitated to the bottom of the Vessel, in which (Vessel) the white ashes of the Tin ly. This matter lying in the bottom, is to be edulcorated, dryed, and reduced by a strong fire, by which operation you have not only an augmentation of your *Luna*, but it is likewise made golden.

NB. This business may also be thus managed, First, dissolve ♄ or ☽ in *Aqua Fortis*; to the solution add an equal quantity of Rain-water, pour this mixture upon ♀, and let the solution be made in a pretty warm place with sand; separate that which is dissolved, the matter that is yet somewhat harder, by decanting or pouring it off, then make the precipitation with salt-water, edulcorate it dry it, and melt it, and you shall have Encrease.

But if this Mass will not so easily melt, then powder it, and mix it either with Antimony, Glass of Lead, or with a fluxing matter made of salt of ashes and flints, that thereby it may be made fluxile or meltable: That which is made fusile by the help of the Glass of Flints, is presently pure; so is not that which is done by the help of the Glass of Lead, for that must be hence separated, and be (by the benefit of ♂ and ♂) reduced into Reguluses, and be purified and washed by Salt-petre. Therefore it is the better way to promote the melting, with the Glass of Flints than with Antimony, because the ☽ may be afterwards separated without Loss, which is not so easie a thing for every one to do (otherwise.)

The Reduction which is made by the help of the Glass of Lead, is indeed (otherwise a most easy way, but by that way which is done with Antimony, we get more ☉ than by any other way.

Another way of Augmenting Sol.

TAke the golden Talck, Granates, Smiris, Hematitis, the aureous Scoria's of Copper, the greenish, reddish, golden Flint, Sand, or Clay; extract their volatile Gold with a strong *Aqua Regia*; pour into the solution, a solution of Lead made by *Aqua Fortis*; mix it well; when the matter is settled, separate the *Aqua Fortis* by inclination; edulcorate the said Calx of ♄ with water, and dry it, and so have we gotten the volatile Gold extracted out of the *Aqua Regia* by the ♄: This volatile Gold is made fixt on this wise. Take the most subtle Powder of ☉, or its most thin Leaves, add thereto thrice as much of this ☿ of ♄; or four times as much, or six times, according to the quantity of it, by which we formerly got (or fish'd out) the volatile Gold: Set it in such a place where it may have a gentler heat, so as that the ☿ of

♄ may juſt flow, and not fume; the matter is to be thus kept in this heat for ſome hours, or rather days, that ſo the filings of ☉ or its thin Leaves may by little and little attract the volatile Gold out of the ☿ of ♄, and conſequently be therewithal augmented.

NB. But ſeeing it is a moſt difficult thing to keep ſuch a very temperate heat as that nothing at all of the ☿ ſhall fly away, and the ☉ ſhall not melt in the Crucible: It is better to put the ☉ mixt with the ☿ of ♄ in a coated Retort, and ſet it at a ſtrong Fire for a; ſeaſon for ſo nothing of the ☿ of ♄ flies away, or penetrates the Crucible. That which aſcends up to the Neck of the Retort may be ſeparated, and be kept for common ☿ of ♄, out of which may be prepared a moſt excellent Medicine.

Another Augmentation of Sol.

TAke of red Arſenick, Auripigment, *Hungarian* Antimony or Cinnabar one part, of ☿ of ♄ three parts, and ſome thin Plates of Gold; let them ſtand in a Glaſs Retort in a pretty hot place, and ſo the ☉ will attract the volatile Gold out of the added Minerals, and will thereby augment it ſelf. And if ſo be that there be any thing ſublimed up to the neck of the Retort it may be taken thencefrom, and be reduced to a kind of Tincture. And ſo we may here have a particular augmentation of ☉, and a matter whereout of a Tincture may be prepared.

NB. The veſſel that is moſt fit for the fixation of the Tincture, is ſuch an one as is made of fixt ♄.

NB. The ☿ of ♄ or ☽ may be reduced by a ſecret fuſion (or fuſile matter) whereby it preſently yields an aureous ☽ or ♄: but eſpecially this ☿ of ☽ or ♄, by the help of which, there hath bin a fixt or volatile Gold extracted out of the earth, ſtones, ſand, and ſuch like Minerals, is to be on this wiſe reduced, whereby we may receive (and get) as well the volatile Gold as the fixt.

Likewiſe too, the ☿ of ☽ or ♄ may be artificially diſtilled, purified, and prepared for a ſingular Medicament; But yet let no body perſwade himſelf that ſuch a diſtillation is to be perfected after the common way with retorts or cucurbites, for it is a meerly vain thing to hope for the ſeparation of the pure from the impure that kind of way, for becauſe the fire forceth up the good and bad alike, the which thing is not at all ſo done by my more ſecret Philoſophical diſtillation; for by it, the moſt pure ſoul only of the Metal is driven up; as for the terreſtreity that remains, it is ſeparated of it ſelf by that more impure (thing) to which it is conjoined, and makes a dirtyiſh ſlime. The purer part will be found (by the help of the Cementatory Copple) to contain both ☉ and ☽; as well the purer part of that which is prepared by it ſelf of this (bare) ☿ of ☽ and ♄: as that which is prepared of ſuch (a ☿,) as by whoſe help fixt and volatile Gold hath been educed (or gotten) out of the nitrous Water; which way alſo is a moſt compendious one, of reducing the (extracted) volatile and fixt Gold. For when we reduce this ☿ of ☽ or ♄ by the help of fuſing things, ſome part of the ☉ may eaſily periſh and evaporate: But now here, nothing at all periſheth: For that which does not remain (behind) in the ſaid artificial diſtillation, and ſo ſeparate it ſelf from impurities, goes out (or paſſeth over) and yields a moſt excellent Medicament more excellent than ☉ it ſelf, which you are well to obſerve.

Beſides too, it is a thing moſt eaſie to be done to fix the ſoul of ☽ or ♄ (that is carried [or forced] up, together with the volatile Spirit,) in the ſaid inſtrument with ☉; which to effect, there (otherwiſe) needs a longer time. Therefore even by this one only proceſs is both made a moſt excellent Medicament, and withal, ☉ is gotten too. Theſe things we have here expoſed in very few and plain Words moſt agreeable to the truth, and do moſt exactly anſwer to experience; nor is there any reaſon of blaming me becauſe of my ſpeaking ſomewhat obſcurely, ſeeing it is evident that not one of my Predeceſſors did ever exhibit (or publiſh) any of thoſe things. Well, what ſhall I ſay? Excellent Gold may be extracted out of all the kinds of Metals, by the help of Salt-petre; yea with ſo much facility; that it would ſeem an incredible thing to moſt Men, though I ſhould clearly ſet down all the circumſtances, word for word: But yet this (extraction is) not (to be done) without the benefit (or help) of ☉ and ☽: For when we have a purpoſe of augmenting any thing, there muſt in the firſt place of neceſſity be the ſeed of the thing that is to be augmented, and according to the quality of the ſeed there muſt be a fit matrix in which it may take its growth or increaſe. For example; When we ſeek for the increaſing of any vegetable ſeed, we prepare a convenient Earth for the ſame, to which Earth we commit that ſeed, and ſo the like ſort of Herb buds forth, which doth again produce thouſands of ſeeds; which ſeeds are again put into the Earth, and ſo are multiplied even to infinity. This multiplication of Vegetables is ſufficiently enough known, and a moſt eaſie work it is to multiply a Vegetable, if we have but its ſeed, and that it be well conſerved leaſt it die. So likewiſe out of one Fire may be made many yea infinite other Fires, for one is always kindled by another. But when all the ſeed is dead, 'tis an impoſſible thing to produce a new ſeed.

Therefore the moſt Great and Bleſſed GOD, hath moſt excellently ordered it, ſo that the ſeed of Vegetables may be kept the year about; for if it ſhould not be ſo, we might well fear the deſtruction of the chief Herbs in the Winter ſeaſon, which now (by the benefit of their ſeeds ſowed in the Earth) we are able to produce a new.

Now the progreſs or order of the ſeed of Animals is widely different from theſe, although that even they are committed to ſuch like Animal bodies, as being their fruitful ſoil, for multiplication ſake: But yet this ſowing is done by a vaſtly different way from that of Vegetables; For we can keep the ſeed of the Vegetables, and carry it from place to place and ſo plant or ſow it in any part of the Earth we pleaſe; which cannot be done with the ſeed of Animals for we cannot ſo conſerve that, or tranſport it out of one place into another, or ſow it as liſteth us our ſelves. But it muſt be committed unto the matrix, in that very moment of time that it paſſeth out, for it cannot be fruitful and entire if it be but a moment of time out of the body. The ſowing therefore and conception are performed both together by both bodies, *viz.* by the Male and Female. The cauſe of this thing is thus, becauſe the ſeed of the Animals abounds with a volatile, inviſible, and living Spirit; which once loſt the work of multiplication is wholly taken away. Therefore like as one [Animal] multiplication is perfected ſo is the other, nor may we by any means tranſgreſs the courſe of nature.

In like manner are the Minerals alſo multiplied, and by the ſame manner that it is once perfected by, is it to be always after perfected by.

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The Multiplication of the Vegetables and Animals is well enough known to every one, and is every where done, nor (by reason of its being so very common) doth it at all cause in any one an admiration; But the multiplication of the Minerals is not so publick a thing, for there are but a very few that understand it, though it be as easie as the multiplication of Vegetables and Animals, insomuch that I also believe, that there is not any one to be found, that is so stupidly fooliſh, that would not be able presently to apprehend and do the same, were the way but shown unto him. Now that there are so many that erre, and who walk in an unlawful or contrary path, this is not to be imputed to the art it self, but to those that meddle therewithal so inconsiderately, and do not imitate nature, who always keeps her course allotted her by God.

The Multiplication therefore of the Metals doth solely consist in the knowledge of the seed; for as the condition or quality of the seed sown is, like fruits will follow, such nature as the seed you sow is of, such fruits will you reap, and no other. For Example, I seek after ☉: Therefore I must first of all, of necessity have the seed of ☉, at hand, afore I can sow it, or multiply it. Now to have this seed, we must not set about it with words or imagination, but by (getting) the knowledge of nature; for she shews us the safest way, if we did not withdraw our selves from hearing her teach us. Now like as she commits ☉ and ☽ to the Earth, even so, and no otherwise must we also do, if we hope for any good success.

And as we said above, that there lies hidden in every Vegetable and Animal seed, a certain vital or procreating Spirit, without which it is wholly unfit for ought; even so, there resides a certain Spirit in the Minerals, which vivifies and effecteth all, which being absent, death it self follows. This spirit is of no weight or form, and there is nothing to be seen by us but only the habitation or house wherein it dwells; so that scarce the thousandth part of the seed is life and spirit, all the rest is dead. The truth of this thing doth (among other things) appear even from hence, *viz.* if some Vegetable seed be kept beyond its due and naturally appointed time, whereby the Vegetative virtue and spirit vanisheth, it doth not yield any fruit at all, nor can it multiply it self, though it hath its former shape, bigness, and former weight. And therefore, there is not any thing in the three-fold Kingdom of either Vegetables, Animals, or Minerals, but is procreated and multiplied meerly and solely by the benefit of this spirit and implanted Life.

Therefore, even as all the Metals were first wrought after a spiritual manner by the Stars in the Earth (in a convenient Matrix) by the Stars, and made fix; so according as the Matrix it self is pure or impure, so pure or impure Metals are generated; now the Matrix of all things is water or moist earth, in which the Stars are congregated (or united together) are made corporeal, grow up, and are multiplied. Here therefore, if Art would imitate nature, there are required Male-like Astrums and Feminine Matrixes, in which the Astrums may exercise their operations. Therefore by how much purer the metallick Astrum or seed is, and the Matrix purer, so much the nobler effect is produced; and so on the contrary.

But seeing that there is not any Star nobler than ☉, nor Matrix nobler than ☽, there is no more required, but that we make common ☉ Astral by Art; and that we prepare ☽ on such wise, as that it may be instead of a Matrix, wherein the Astrums of ☉ may exercise his operations, and so without doubt, there will thence come such Children as will be like their Parents. Nor is there any ground for any one to think that there is any other way allotted to augment ☉ and ☽, besides that afore mentioned which is to be instituted in a spiritual manner: After this manner the World it self was Created, where the Spirit of God moved upon the Water and impregnated it; and even as we daily see that the Stars do impart to the inferiour things their virtues, and they are thereby multiplied; even so may we do the same by art in these inferiour things; for such as are above, are also beneath. Those above are beyond our reach; but the inferiour ones, not so: For art can do the same with or upon the inferiour things, as the Stars upon the superiour ones. As *Hermes* doth clearly demonstrate in the *Smaragdine* Table. He that understands these my sayings, will also understand those things, which *Paracelsus* delivers in his Book of the *Vexation of Alchymists*, in the 5*th*. Rule especially of ☽; and *Basil* (*Valentine*) where he treats of Sulphur.

It is a thing most easie to be done, but most difficult to be found out, to multiply even the most vile Metals, by the help of the Astrums, and by this secret way. He that well knows Salt-petre and can rightly handle the same, will by the help thereof perform a many profitable things; for as it is altogether impossible to get ☉ out of the viler Metals, without it: So on the contrary it is most easie so to do by its help. Briefly, He that knows how to handle Salt-petre aright, he will excellently well understand the Writings of the Philosophers, and let him know, that he has a light given him, to arrive unto great Secrets.

For we may extract ☉ and ☽, out of all the common meaner or viler Metals, so that an expert Chymist needs not seek after peregrine, or strange Materials. An excellent purification, fixation, and augmentation may perfectly be done by the help of Salt-petre, which being a thing that but few know of, so seems it impossible, and yet the things I propound are most true. It makes bodies volatile and spiritual, and by and by again makes them fixt and compact: So that unto it alone is that saying of the Philosophers due, (*Make the fixt volatile, and the volatile fixt*) and to no other Subjects: Now if Metals be not spiritualized, there's no hopes of their augmentation. *Of something must a nothing be made, and again out of the nothing must something proceed*: So saith *Paracelsus*, which likewise is very true, though there are but a few that believe the same.

The melting together of variously mixt corporeal things, yields forth neither ☉ nor ☽: But contrarywise a spiritual Union which is done with a most strong heat, is a notable author (or promoter) of Multiplication; for the Spirits do most notably penetrate, and by variously acting upon each other, do induce alterations and meliorations, which is denied to dead bodies to perform. The Spirit doth diversly bestow a life, and vivifieth, but the body is of no other use, but to yield an house or habitation to the Spirit; the which is well to be regarded.

Those metalline Spirits (when the work is finished) do insinuate themselves anew into other bodies, which bodies they make far better than the former were, and all this by the help of Salt-petre.

Basil brings in Salt-petre speaking of it self on this wise. He that intends my death needs be a prudent Man, that so he may expel (or force out) my soul from me; when this is done, I adventure upon all the things I am able to do, but I can do nothing that has in it firmness (or substantially) in the bottom, (or radically:)

dically): *Venus* is my chearful Woman, whom (in this place) I take to Wife, but the wedding is celebrated in the very inward parts (or center) where the ſweat flows out of us both in a moſt plentiful manner. So the ſubtile (part) in us, expelleth all defilements, whence it is, that we leave behind us moſt rich Children, and do reſerve (or keep in ſtore) moſt eminent Treaſures for the dead bodies, which we give them by our Will and Teſtament. Who would ſpeak more clearly, and would not underſtand theſe words of themſelves, (or as they are) without any interpretation.

The ancient Philoſophers wrote, that at the riſing of the Sun is a Bird found in thoſe hotter Countries; which builds his neſt with Gold; and when he is grown old, and can live no longer, he gathers together exceeding dry Wood, which being kindled by the heat of the ☉, conſumes both the Neſt and the Bird too, from the aſhes moiſtned with rain Water, they ſay there ariſe Worms which will be again changed into other Phœnixes.

Theſe ſayings are indeed Fabulous, yet nevertheleſs there is a moſt high ſecret diſcloſed by them: for if we rightly conſider all circumſtances, we ſhall find that Salt-petre is hereby meant, which gathers the Gold into his Neſt, that is, extracts the Gold out of Metals, Stones, and Minerals, and doth afterwards increaſe his Family by the burning them. This to a wiſe man is enough.

Now that this Arcanum may be the more manifeſt, I will add over and above, another way of extracting the fixt and volatile Gold out of Stones and all kinds of Minerals, by the help of Salt-petre, and of making them corporeal.

We may very well compare this work to a fiſhing Trade, concerning which the Philoſophers have written many things, but very obſcure; *Sandivog*, hath more clearly treated of that thing, but *Iſaac Holland* cleareſt of all. Verily this Philoſopher was an excellent fiſher of Pearls and an excellent preſſer of Cheeſe, and for this very reaſon he aſſumed to himſelf ſuch a name. For *Iſacus* by tranſpoſition of Letters is the ſame with *Caſius*, (or Cheeſe.) So that it may be ſaid to be *Holland* Cheeſe; not that *Hollandus* was in very deed a maker of the uſual Cheeſe with milk, but that he bears ſome kind of reſemblance (in his work) with ſuch Men: For he beſtowed abundance of labour about working on that Univerſal, that hath ſome Cheeſe-like faſhion in it.

Even as the *Hollanders* gather the greateſt quantity of Milk more than all Nations beſides, out of which they preſs their Cheeſes, and ſo ſuſtain them and theirs; ſo the more skilful Chymiſts do frame or make Cheeſes after a Philoſophical manner, and that out of Metals, Salts, and Herbs: and this very much agreeable to that method, according to which we ſee the *Hollanders* proceed in making their Sheep-milk Cheeſe, where they boil in the Milk ſome green Herbs, and ſo do thence extract a colour afore they ſet about the coagulating or curdling of it. That is, they diſſolve ♄ or ☽ in *Aqua-fortis*, and a Golden matter, though it be but ♀ or ♃ (if they have not at hand any better) in *Aqua Regia*: They mix together both ſolutions having both of them the form of Virgin-milk, and they add as much Salt as is ſufficient. (NB. 'Tis better to add Salt-water, or Spirit of Salt,) and you ſhall preſently ſee that milk to be coagulated, like as (when we pour on ſome Salt-water or Spirit of Salt upon Cow or Sheep milk) we obſerve daily to happen: where the Water is partly ſeparated by decantation, and partly by expreſſion from the coagulated or cheeſy ſubſtance wrapt up in a Linen cloth, that ſo a Cheeſe may thence be made.

Juſt ſo do we proceed in the making of our metallick Cheeſe; for when we pour Salt-water or Spirit of Salt upon the ſolution of ☽ or ♄ mixt with that (ſolution) which is of a goldniſh Nature, *viz.* of ♀ or ♃: we preſently ſee a precipitation made; which done we abſtract the clear water ſwimming at top of the precipitated matter, by inclination or pouring off; the which we may keep for farther uſes, principally for the ſolution of other Metals and golden Subjects. We put the Cheeſe or white Coagulum abiding in the bottom of the Veſſel, into a Linen cloth, and by ſtrong ſqueezing it free it wholly from the waterineſs, which ſaid water is to be kept as well as the former, for being uſed about making new Cheeſes, it makes them of the better ſavour, and more aureous and vendible.

This Whey, or that water which is plentifully gathered in the making the Cow-milk Cheeſes, though it affords varieties of Profit to mankind, whether they give it their Hogs to fatten them, or uſe it themſelves for their daily drink, eſpecially in Summer time, or apply it to other uſes as we ſee daily done, yet do not I ſee any better benefit than that which it yields to the *Curriers*. For they put in it ſome old Iron, and when the ſolution is made, they moiſten with that water the hide already perfect (or ready dreſſed) and when 'tis dry they moiſten it therewithal again, and this they do three or four times, until it hath gotten a fixt colour, blacker than a Coal. They do alſo ſometimes adminiſter ſome of it unto Children (with good ſucceſs) to kill and expel the Worms: Nay more, they are likewiſe wont to make a Bath thereof very profitable for thoſe that are troubled with the Scabs or Itch, becauſe it hath gotten a drying force from the ♂, and thereupon it makes the skin ſmooth and hard: and ſeeing that the Country Fellows, and Labourers can do ſo much with it, what hinders but that we may inſtitute ſuch a curing more perfect, and that on this wiſe.

Take ſweet Cow-milk, or (which is better) Goats-milk, two meaſures, boil it over the Fire, put thereinto while it is yet warm ℥j. or ℥ij. of Spirit of Salt, mix it well, and you ſhall ſee the coagulum or curd preſently ſeparate from the whey; out of which, Cheeſes may be made by expreſſion, which are far better than others, by reaſon of the addition of the Spirit of Salt, whereto if you add ſome Cummine, Carraway, or ſome ſpices, they are yet better and more to be preferred. The Whey here ſeparated is of a grateful ſavour, and by reaſon of the admixtion of the Spirit of Salt, is ſomewhat acidiſh, and a moſt certain and moſt ſafe looſner or abſterger, being adminiſtred to Infants that are troubled with the Worms, or even to Elder ones that are feeble. How many Infants have we obſerved to die unexpectedly after they have been for ſome while and often afflicted with a burning Fever, the Convulſion fits, and other ſuch like effects, and meerly becauſe we will not perſwade our ſelves that they have the worms, & ſo forbear the uſing any remedies to purge them out? Now in ſuch a caſe this whey is exceedingly excellent, being uſed after this manner.

Take of the moſt ſubtile filings of ſteel as much as will lie upon a knife's point, mix it with as much honey as is ſufficient, and give it the Children: and for their ordinary drink, let them uſe the ſaid Whey, and ſo by this means, that filings being diſſolved by the Whey kills the Worms, in the ventricle or ſtomach and drives them out, and verily is a moſt excellent Medicament:

cament; especially if taken two or three days; nor have I hitherto met with a nobler, than this is. And so there will redound some profit to Children and Infants too, by this our way of making Cheese, for which we owe immortal thanks to the Great and Glorious God.

Besides this, I have likewise observed the excellent use of this Whey, in the administration of my Panacea of Antimony, if there be taken a draught or two thereof, at the end of the Purgation; for it gently carries off the reliques that stick to the intestines.

He likewise that is so minded, may before his dropping in the spirit of Salt, add some Anise-seed or Fennel-seed to the milk as it boils, thereby to correct its Flatulency or Windiness.

And I do most curteously intreat the well-minded Reader to take it in good part, that I have been so prolix in declaring the virtues of our Whey; necessity it self, and the love of my neighbour forbad my concealing of them: For very many Infants are killed with the Fever, and Epilepsy, or Convulsion-fits, and so suddenly die, for no other cause but our not meeting with the Worms, which their bodies are full of, being ignorant of convenient remedies.

Now then to return again to our Cheese, and to demonstrate the most eminent benefit, both of it, and of our water which is thence separated; we are first of all to know, that even it is also able to tinge (some) subjects with a certain colour, not with such a black colour, indeed, as the Whey of Milk, prepared as aforesaid, dyes the Curriers Hides with, but with a yellow colour, and more durable than that which is given to the hide, for that we therewith extract a Tincture out of ♀ and other aureous Subjects, and with the Tincture, do sometimes anoint (or tinge) *Luna*. If now the water abound with such virtues; what virtues will not the Cheese it self abound withal? And like as our Cheeses are diversly impregnated with spices, so are they of different savour, and price, and more or less wholsome. But now if that virtue which is in ♃ is also added to our Cheeses, there will proceed from thence admirable Cheeses; and this, that Philosopher was minded to point at, who writes that by the help of the Saturnine net, he is able even in a clear night to extract the little Fish *Eschineis* out of the Sea.

The Ultimate (or extream) letters of this word *Eschineis i.* and *s.* if conjoined together, so as that the letter *z.* be thereof made, and then the word read backward, it will sound in the *German* tongue the same with *Zieneſch*, (*viz.*) the ashes of Tin; but yet let not any one perswade himself that those ashes of Tin are such as are made by means of the (bare) fire, but are prepared by the benefit of the spirit of Nitre.

Saturn does not only claim (or merit) the praises of being a husbandman, but also of being a good fisher, and hunter, as (among other writers) *Basil Valentine* doth egregiously shew.

When ☉, ☽, ♃, and ♂ pursue (or hunt) the wild beasts, ♄ is bound to carry the net: *N B.* the hunting dogs here are Salts, the hare that is caught, is much like the colour of the hares skin, being stript of the same, he will yield excellent flesh, which the Princes can as little want as the Subjects can. *See the foregoing Figure of the Hares and Hounds, with a Flaming Heart, and the word VENUS.*

Common Vitriol, but that especially which is found in those places where Gold is, is the green Sea containing excellent fishes.

Neither was *Isaac Holland* an excellent maker of Cheese only, as we said but now, but withal, he was a singular fisher of Pearls; for with the net of ♄ (the night being clear) we may catch most excellent Pearls, but yet 'tis a very hard thing to take them out of the net, nor can they be separated but with a great deal of prudence and art, from the threds of the nets, to which they do stick so firmly.

But yet this separation is best of all done in a clear Light, the Sun shining upon the Earth with his beams, and wholly dissipating the Vapours, least it should be hindred by their being present. For the parts being exposed to the Air in a (perhaps he means unseasonable) seasonable weather are corrupted, nor does any thing remain behind but the shells. And even these shells do in their inside shew forth such diversity of delicate colours, as that the most ingenious Painter cannot imitate them with his pencil, and such they are as with which the other shells of mother of Pearl or the commoner sort cannot at all compare: For in one place they represent pure ☉, in another pure ☽, in another they are of a Green colour, Sky colour, Red, Yellow, and variously coloured, so that they much exceed in beauty, the Peacocks Tail. If then the shells are so fair as that we cannot sufficiently enough admire them; what I pray will the beauty of the Pearls themselves be? Nor let any one perswade himself that I do here cast Pearls before swine by too much divulging secresies; (no) for here are yet many necessary things hereto requisite to make the Pearls come in sight; and if so be that any one should know the way of dexterously extracting them out of the net it self; yet the fixing of them doth require abundance of labour still, whereby they may be able to defend their fairness and excellency, against all the Elements; however, in the mean time the lover of Chymistry, may delight his mind with those shells, and admire at the most admirable variety of the colours in them.

Some haply there will be, that when they have taken the said Pearl, by the help of ♄ and ☽, will think it a most easie thing to separate it from the net, by the benefit of destillation; but let those good men know, that this is a thing impossible to be done; for I my self bestowed abundance of labour in vain on this operation, and this hath to my knowledge so happened to others too; for in the common destillation, that Pearl being commixt with the net, even the Mother together with the Daughter do jointly ascend and get out; and thus to do is not at all agreeable or helpful for the great work; though nevertheless *an excellent particular Medicament may thencefrom be made.* Concerning which, I have spoken in the second and third Part of my *Pharmacopœia Spagyrica*; nor may we expect (by such a destillation) the thing we wish for. But if so be you desire to see the Mother, wrap the net together with the Infant in pure linen, first mundifyed, and washt in the fire; or put them in a glazed Stove, and put fire thereunder by degrees, and make the Net and Pearl to sweat largely, which being kept apart, yields a singular Medicament, for to quench all the Internal heat of the Body, and always to cool the burning Mercury.

The provocation of the sweat being finisht, break the sweating glasses, and look for your Pearl, and you shall find that it is gone out of the shells, by the force of the heat, and is roasted (as it were) toge-

ther with the Net, and cannot poſſibly be (as yet) ſeen; yet nevertheleſs it is brought to a farther maturity, and doth yield ſome profit in an eſpecial (or particular) way. But the Sudatory it ſelf, contracts incomparable Colours from the ſweat of the Pearl.

Now then, live contented with the moſt beautiful mother, and delight thy mind by barely beholding it, until it ſhall pleaſe God to give unto thee, the infant alſo. When it was my hap at firſt to behold that beauteous mother, my mind, that was wearied with the long labour of ſearching thereinto, was ſo refreſhed, that I can ſcarce declare it with words; yea I was ſo delighted, that I placed that delectable mother in ſuch a place, where it might lie always open to my ſight, and that ſo long till ſhe ſhewed me her infant likewiſe, which Infant verily was not unlike to *Cupid*. Do you alſo ſeek, and you will find what you wiſh for: Implore God, and he will give unto you; Knock at his doors, and they will be opened unto thee, if ſo be that GOD ſhall find thee worthy; for he beſtows his Grace and Mercy upon none, but ſuch as are of an humble and thankful mind. Take for an example of this ſome Tinder, or Touchwood, which being handled with dirty fingers, refuſeth to take fire, though it be never ſo copiouſly ſmitten out of the Steel with the Stone (or Flint.)

All things depend on the mercy of GOD, nor can we effect any thing by our labour. Him only ſhould we ſeek, and he will manifeſt himſelf by the works of nature, even as the nature of a man is known by Chiromancy, and Phyſiognomy.

Two contraries do always produce a third thing, and are the cauſe of every generation, and change of things; if fire be added to fire, there ariſeth no new thing from thence; neither if you put water to water; but water and fire being conjoined, there are produced new Generations; for the fire acts upon the water, and impregnates it according to the nature and properties of (both) the water and fire; from whence there proceed things pure or impure, according to the purity or impurity of the water and fire.

The thing (or operation) it ſelf, muſt be accurately known and handled, if you would have any good to redound from thence unto you. The Sun is in himſelf always good, yet doth he operate as well evil as good. If this ſame Sun beſtows his Rays or Beams upon the Rain as it falls down, the Rain doth thence contract (or get) a honeyiſh dew, which falling upon the bloſſoming of Trees, makes them corrupt. Now we cannot rightly impute this evil to the Sun or to the honey it ſelf; but we ſee that it proceedeth from hence, (*viz.*) becauſe that honeyed dew is not duely and ſpeedily enough waſht away with the rain, but is evaporated by the heat of the ☉; whence it comes to paſs, that the bloſſoms wither, and worms are generated in them, and ſo the whole bloſſom is corrupted.

We will ſet down here yet, one more ſimilitude for the ſake of ſuch as love the truth. Put caſe thus then; a diligent Gardiner walks abroad in his Orchard for his recreation, and if he happens to find a large, great and curious principal Apple lying on the ground, he preſently takes it up, and does not only well view and conſider of it, but taſts it too; which if he finds to be of an acceptable ſavour, he ſeeks out the Tree it ſelf, with an intention to pluck off more ſuch like conditioned Apples; having found out the Tree, he much ſets by it, or eſteems it, becauſe the fruits thereof do exceed all the reſt in the Orchard, both in taſt and fairneſs, and he takes care about that more than the reſt, dungs the roots well, prunes off the withered branches with a ſharp crooked knife, and artificially cuts off thoſe that are unprofitable, and uſually called ſuckers, that draw away the juice from the fruit-bearing boughs.

Even juſt after this manner doth a diligent Chymiſt act; if therefore, (as he walks in his Laboratory,) ſearching out the ſecrets of nature, he happens upon a Golden Apple, he ſeeks after the tree, that bears ſuch fruit, and having found it, he very charily keeps it, and miniſters unto it all ſuch things as are neceſſary to its conſervation, that ſo he may thence receive more ſuch like-conditioned Apples; and therefore gardiner-like he puts dung to the root, that is, Nitre; he prunes off the dry barren wood, and alſo the hurtful ſuperfluous boughs, that is, the ſuperfluous Sulphur, with a ſharp red hot iron, whereby that ſame tree may, for the future, yield egregious or ſelect fruits, without any impediment, which thing he alſo finds to come to paſs.

N B. *Paracelſus* doth very openly ſet before us this labour in his *Cœlum Philoſophorum*, in the ſixth Rule of Mercury, where he ſaith, Sacrifice the fat Vervains (or ſuperfluous ſuckers); and yet, theſe words of his, are only ſuperficially lookt on, moſt people not underſtanding what *Paracelſus* means by thoſe words, though he hath clearly and perſpicuouſly enough ſigned his writings.

It is a neceſſary thing here for the Chymiſt to know, how the caſe ſtands, as concerning the metalline tree, and what is to be accompted its Root, Trunck, Bloſſoms, and Fruits; ♄ is the Root; ♂ the Trunck or Body, ♃ the Bark about the Trunck; ☿ the nutritive Juice between the Bark and the Trunck; ♀ the green Boughs and Leaves; ☽ the pleaſant Flower, or Bloſſom; and ☉ the ripe Apple containing in it ſelf the ſeed of the Tree.

That Apple which yet ſticks on the tree, doth, when it hath arrived to its full maturity, fall down upon the earth, of its own accord, if it be not gathered by the Gardiner; and then afterwards the leaves themſelves, when the weather is ſomewhat colder, fall off, which do as it were bury the apple, which lying hidden under the leaves, is conſumed by rottenneſs, by little and little; but the ſeed aſſuming to it ſelf a natural humidity from the putrefying tree (or fruit rather) inſtead of nutriment, begins to take root in the ſpring time; out of which there grow up, in proceſs of time, Apple-trees, which are to be in their fit ſeaſon tranſplanted: this tranſplanting being finiſhed, the Gardiner joins to ſuch a wild tree, generated from the ſeed, the Scions of ſuch fruit as he has a mind to, and that by either ingrafting, or inoculation. And ſo an induſtrious gardiner may get from the fruit of one tree, an innumerable company of great trees, and thoſe of ſuch a nature and kind, and grateful a ſavour as he likes beſt.

Even on this wiſe doth the Chymiſt do, joining fruitful Scions to wild truncks or ſtocks, by inoculation, ſo that he never wants good fruits.

He that cannot learn ought from theſe things, I cannot help him any other way, for I do not ſee how I can ſet down thoſe things clearer than I have done.

But for the undertaking of this labour, there is required an Artiſt, no leſs diligent than ingenious. And of how much the better quality the dung is,

that

that is laid to the root of the tree, and (by how much) the knife which the boughs are cut off withal, is the sharper (that so it may not hurt the green (or growing) bark of the tree, and so the nutritive juice flow forth, so much the better are the fruits generated. As it is easie for a wise man to reap hence some things; so it's difficult for an imprudent man.

I doubt not but that there will be some, that being judicious men, will know that there is an opportunity given them by my writings, published out of a sincere mind, of making farther inquiry after a true transmutation, and consequently of esteeming it, more than we find to be usually done (because that most things are oft-times propoled craftily and cautiously.

But that such a noble art may be freed from any farther contempt, I have purposed, the next following Spring, to frame a convenient laboratory, and to demonstrate the truth thereof to my friends. And although my endeavours shall be to prohibit any entrance by any means to the faithless brethren of *Farnnerus*, yet notwithstanding, I know I cannot so prevent and foresee, but that one or other may adjoin himself to the number of the true lovers of Chymistry, and feigning friendship, lay snares for me.

But put case that such a thing should not happen, it cannot be but that the Arcana's will be divulged; for such things as this or that man sees, and writes down, may reasonably be thought, will come to other mens hands after they are dead; especially if the preparation of Salt-petre be afore instituted, or set up in divers places; for nothing can be done in Alchimy, saith *Paracelsus* without Nitre; Alchimy is found to reside in Nitre say I. Salt-petre shewed us Alchimy, or, Alchimy was found out by Nitre.

He therefore that has abundance of Salt-petre, can perform egregious things in Alchimy. Had not the *Ægyptians* been possessors of great plenty of Salt-petre, verily they would never have been so skilful in Alchimy; nor could they have had those riches, by which they were able to avert (or decline) the yoke of the Roman Monarchy.

As long as they knew the use of Sulphur (Saltpetre I believe he means) they enjoyed Monarchy (without servitude to others) (and this was even to the time of *Diocletian* the Emperour, who knowing their power, commanded all the Books they used, to be burnt) and then their Monarchy and their Art it self perished together.

The Poets have feigned many stories of *Jupiter*'s Golden shower; certainly did we but know the manner of duely managing Salt-petre and ♃ together, we should be likewise able to produce the golden shower.

Jupiter, when stirred up with anger, doth with his Thunder and Lightning, strike a terrour into all the Gods, and into whatsoever is upon the Earth; and yet the rain that falls then, at such a time, is of an excellent Quality, and makes the Earth more fruitful than the rain that commonly falls is wont to do; because there is a certain tinging and penetrating spirit sticking in the Thunder, that tingeth the air and the rain, and animates it; if therefore we can (by the virtue of Nitre, and this same ♃) produce such Thunders, & can give to the Thunder fire & air, by which it might operate; verily there would nothing hinder, but that we might (*Jupiter*-like) make a Golden shower too. The purer the ♃ shall be, and the more clear the Air, so much the purer will the Rain be, and the Air is more impregnated and filled with the common Vital Spirit.

He now that knows how to separate the life out of the water and air, rightly animated, gets a true *aurum potabile*, or the Soul of the world: besides this too, there offer themselves apparently such things to be done, as are able to exhibit his daily food. And thus much let suffice for this time.

He verily that perceives (or understands) not these things so clearly proposed, surely he will not, though all the Gods themselves should relate them, understand ought of those things that are taught. In the mean time, I hope that my friends will see with their Eyes, and feel with their Hands, the most certain truth of these, and the like operations, and consequently of my writings, in a laboratory, which God willing, I will in a short time erect, and will then defend me against all envious, and carping men.

This one thing I will yet add over and above, that the astrum of Gold doth tinge his own proper Mercury, or (the ☿) of the first *ens*, (therefore) chiefest of all: The Astrum of ♄ (tingeth) ☽; the Astrum of ♃, common ♀; the Astrum of ♂, ♀; for those three superiours do always operate upon these three inferiour (Planets;) so that they are, as it were, upper men, and lower women: ☉ he is left in the midst, which whosoever adds unto the others for the compleating of the operations, will perform excellent things.

But he that knows how to make that Astrum of ☉ corporeal and fixt, he may translate the Astrum of ☉ on this wise prepared, out of one place into another, and conserve it like a Vegetable seed, to be implanted into all the Metals, in time and place convenient; which blessing, we rightly attribute to the blessed great GOD, the giver of every good thing, in the first place, and then to Salt-petre as being the Northern Monarch.

It now remains, that we briefly shew, by what means that Nitrous water, out of which that most noble Pearl, ☉ and Gems are taken with the Net, may be prepared for farther uses, so that such a fishing may need but very small costs, and may nevertheless (besides the daily food which it most plentifully provides us) bestow on us a most excellent medicament.

We have taught in the foregoing directions, how we may by the help of *Aqua-fortis* or *Aqua-regia* most easily extract both the fixt and volatile ☉ and ☽ out of the Metals, Flints, Sand, Clay, and such subjects as are every where obvious, and precipitate, coagulate, dry, and reduce it into a fixt metallick body.

Now in doing these things, part of the separatory water here used, is as yet good enough, and may be kept for farther uses; but part thereof (*viz.*) that which is extracted out of the Metals by the help of common water, is, by reason of the mixing sweet or fair water therewith, rendred too weak for operating withal, and therefore must it be corrected and amended by some certain singular way, so as it may be again used about doing the same work.

Were it not for costs and labours we might separate that fair water from the *Aqua-fortis* and *Aqua-regia*, by the benefit of a glass Cucurbite, but forasmuch as there is given us a more compendious way, we will make choice of that.

For he that intends to get himself riches by the benefit of this separatory work delivered by me, or by the extraction of ☉ and ☽, will need a great deal of *Aqua-fortis* and *Aqua-Regia*, for what profit is it if you would extract them out of (but) a few Metals

or

or Minerals? Seeing that ſcarce the one half of thoſe ſtrong Waters can be ſeparated by pouring off from thoſe ſubjects upon which they are poured, but the chiefeſt (or biggeſt) part of them ſticks to the ſaid metalline Matters, and contains in it as much ☉ and ☽, as that which we have abſtracted by decanting it, and requiſite it is that we thence abſtract the ſame by the benefit of fair Water by due boiling, from whence it comes to paſs that there will be alſo gathered a great deal of (inſipid or uſeleſs) Water, (over and above.)

Thoſe *Aqua-fortis*'s that are poured off, and hold in them ☉ and ☽, when they are mixt together, the ☽ and ☉ precipitates to the bottom of the Glaſs like powder, ſo that there remains nothing of the Metal in either water, nor is that water ariſing from the mixing of the *Aqua-fortis* wherein the ☽ was diſſolved, and of the *Aqua-regia* wherein the ☉ was diſſolved, at all the weaker, but it retains the virtues of extracting ☉ but not of ☽, becauſe that the *Aqua-regia* being added to the *Aqua-fortis* converts it all of it into *Aqua-regia*.

This precipitation being made, and the clear water ſeparated from the precipitation by decanting it, you may extract that acid Water, which yet adheres to the precipitate, with fair Water; but for as much as the virtues thereof are thereby much weakned, 'tis better to proceed after another kind of way, and we preferr this way (as beſt.)

Take the Calxes of ☉ and ☽ as they lie at the bottom of the *Aqua-regia* (or the acid mixt Spirits) and put them in a Linen cloth placed in a Funnel or over a Glaſs with a wide mouth, and the greateſt part of the *Aqua-regia* will ſtrain through into the Glaſs ſet thereunder; when no more water drops out, which we find is wont to be within half an hours ſpace, tie up your cloth with a ſtrong thred, that ſo nothing of the calx therein contained may get out; put it under ſome weight or heavy matter, that ſo all the *Aqua-regia* may be ſqueezed out, and the calx only may remain behind like Curd or new Cheeſe.

But for as much as the Calxes of ☉ and ☽ are not edulcorated, hence it comes to paſs that the Cheeſe thence prepared, after the manner now ſpoken of, is as yet corroſive, nor is it eaſily dried. Both of them (☉ and ☽) we may eaſily correct, if we only admix therewith (as 'tis laid in a diſh) a fourth part of fixt Salt, for by the virtue thereof even the corroſive Spirits ſticking as yet therein are mortified, and the exſiccation, cementation, fixation, & reduction thereof is promoted. The Reduction being made of ☉ and ☽ which we are now made partakers of, that goldeniſh ſilvery Maſſe is to be granulated, and to be diſſolved in new *Aqua-fortis*, and be precipitated with that *Aqua-regia* by the help of which, ☉ hath been extracted out of the Metals; the Cheeſe is to be freed from the water by ſqueezing it, and is to be ſprinkled over with a fixt Salt, and to be melted. And all theſe Operations are to be ſo often repeated as neceſſity ſhall require, and there ſhall be at hand any Metal whereout-of Gold may be extracted; and ſo there may thence ariſe a continual Labour, which is beneficial, becauſe that *Aqua fortis* may (when the Labour or Operation is finiſhed) be uſed about other ſuch like extractions, and that which is the weaker ſort may be prepared into Salt-petre: out of which may he made anew, excellent *Aqua-fortis* by the addition of Vitriol or Copperas, and ſo deſtilling them. The Veſſels wherein the precipitation of Metals is performed, yea and the preſſes too by whoſe help the water is ſqueezed out of the Cheeſe, muſt be framed of ſtrong Glaſs or of glazing Earth well glazed.

But for as much as the Veſſels of Glaſs are very ſubject to be broken, and earthen Veſſels, unleſs they have the ſolidity of Glaſs, waſte abundance of water, and ſo moulder away; it would ſeem more convenient in my judgment to make the expreſſion of the water out of the Cheeſe, between two Plates of Silver, for the water of the Cheeſe doth not at all corrode the ☽: Yea and if the Tunnels requiſite to this work were made of ☽, it would not be amiſs, nor would there be any fear of their breaking.

NB. The Extraction alſo of ☉ made with *Aqua-regia* may likewiſe be put into a Silver Cucurbite, whereby the work may be facilitated, and all loſs and damage which otherwiſe may be lookt for (feared) from the uſing of Glaſſes, may be prevented. And ſuppoſe a Cucurbite, a Preſs and two Tunnels did coſt one hundred imperials; yet notwithſtanding the certainty and celerity of the Work will repay thoſe coſts very eaſily, ſeeing that all things are hereby done much ſafer, and much more ſpeedily: Beſides too, there's nothing loſt but the price of the faſhioning your Veſſels, for the Silver is always of the ſame value, and may again be ſold at your pleaſure. But he that wants ſuch like Silver Veſſels or cannot buy them, he may make uſe of Glaſs ones ſo long till he can get Silver ones; but it is neceſſary that the Silver of which theſe Veſſels are made be very pure, and have no Copper in it; leaſt the *Aqua-regia* extract the Copper thereout of, and ſo the Veſſels (eſpecially the Cucurbites) do in proceſs of time get an undue ſoftneſs.

The manner of extracting Metals by the help of this Cheeſe-water, is already diſcloſed in the foregoing (writings); however this I am conſtrained to adviſe here, that it is much more expedient, to uſe preſently at the beginning for the extraction of ☉, rectified Spirit of Salt accuated with *Aqua-fortis*, than *Aqua-regia*, becauſe that by thus doing there will be more plenty of ☉ gotten in the reduction than when the operation is accompliſht by *Aqua-regia*. It would be too long to reckon up the cauſe of this thing in this place: 'tis ſufficient that I have ſhown which is good, which ill. Nay more, Spirit of Salt is cheaper than *Aqua-regia*, if prepared according to my deſcription: Nor is there any reaſon to give credit to that ſlanderous fellow, *Farnnerus*, as if ſuch a Spirit made by Vitriol, according to the manner mentioned in the firſt part of the Philoſophical Furnaces, were not of any uſe, or at leaſt-wiſe could not be prepared in great quantity by the aforeſaid way: For when all circumſtances fall not out as is wiſht, the blame is not to be imputed to my deſcription, but to the ignorance and unaptneſs of the Chymiſt himſelf.

If now thoſe good men cannot accompliſh ſuch operations which are word for word faithfully deſcribed unto them: how would they be able then to arrive by ſpeculations and various trials to the knowledge of any thing, as I my ſelf have done? I do therefore atteſt here too, that we are able moſt eaſily to prepare not barely 10 or 20, but even 30, 40, 50 pounds and more every day with one only Furnace.

Nay more, if men did more accurately ruminate upon this buſineſs, they would find, that out of one pound of Salt may be made in a Glaſs cucurbite in ſand, one pound of the beſt, moſt grateful Spirit of Salt needing no rectification, and that in one hours ſpace: And by the benefit of a Furnace ſcarce a ſpan wide, and with a very few Char-coal, ſcarce exceeding three pound weight. Verily if there be any artificial deſtillation

this

this is it: And now let the Find-faults look about them and see if they can understand these things we have spoken; we can at all times demonstrate the truth hereof. It is altogether inconvenient to shew such an artificial destillation unto swinish Men, it is only due to the Lovers of the truth, of which sort there are to be found but a very few in this present age.

And that this is true, *viz.* that a most grateful Spirit of Salt may most easily be prepared in vast quantity, doth even hencefrom most evidently appear, in that there are some in these places who having followed my information, do, because of their making it in great plenty and without any great Labour, sell a pound thereof for an imperial. For my own particular affairs do not permit me to take on me that Labour, yet notwithstanding, I have bestowed the artifice on such Men as now know it as well as I my self do, and who likewise do make that Spirit in such quantity as may supply all *Europe*. But forasmuch as I did not heretofore find out so far, as to see it excel *Aqua-regia* in the extraction of Gold out of such Stones, Sand, and Clay as contain Gold in them, and which are every where obvious. I could not omit the commending of it in this place, most highly unto all Men; for that Spirit hath an especial delight in ☉, not only in that which is fixt, but also with that which is volatile, whereby it extracts it and renders it fixt. There are some Minerals, Stones, Sand, Earths, which have in them abundance of volatile Gold, which is not in the least durable (or fixt,) but is carried up (or forced away) in the form of a vapour and vanisheth into the air, and so consequently not at all to be accounted for true ☉, seeing it cannot brook the force of the melting Fire. Besides this, there do oft-times occur most precious Treasures of no profit to any man, which may be brought to most eminent uses (or benefit) by the Extraction, Precipitation, Cheese-making, and Liquefaction delivered by me. For such Metals as the Spirit of Salt do not tie and make fixt in the extractions, ☽ or ♄ makes them such, with which we have taken or fisht the *Sol* out of the *Aqua-regia* or Spirit of Salt; to the obtaining of which this is also of much conducement. If the Cheese now made be altogether fixt by the help of an artificial Cement, and the gradatory fluxing matter be especially reduced in such a Vessel, out of which not so much as the least volatile part can evaporate: by which it comes to pass, that not only the volatile Gold you have caught is made fixt, but even a part of the net of ☽ or ♄ is by graduation made aureous: For every volatile Gold doth exercise its operations in the Fire upon other Metals, and makes them aureous, so that the *Sol* ariseth thence to be of a greater quantity, than that was which by the help of the silvery or leaden Dart was taken out of the extract. Heed these things and proceed on in a legitimate course, and you shall find such things as you cannot as yet conceive of. The Fishing is clearly enough described in this place, and so is the Cementation and Reduction of the Cheese clearly proposed, and may may be most easily perfected.

But God (if thou becomest acceptable unto him) can yet shew unto thee a much more compendious way of perfecting this work with less labour, and of obtaining greater things.

Be content for this time with what hath been at present taught, give God the thanks and forget not the Poor, and He will then shew unto thee more and more compendious ways, of cheerfully managing the work (here) described, to his Honour, and the Comfort of the Poor, and without any wronging thine own Conscience, or hurting of thy Neighbour.

You need not be much sollicitous about such kind of Earths, Stones or Sand, from which you may extract the Gold, for every land is every where stored with such, nor need we spend much time in searching after them. Likewise it will be a most easie thing for thee by my writings to make Salt-petre, of Salt-petre to make *Aqua-fortis* and *Aqua-regia*: One bare pound of *Aqua-fortis* may be sufficient for thee to begin the operation withal, for there is not much of it lost in the work it self; and what of it is wasted may easily be repaired by an addition of common Salt: And as for the extracting both the fixt and volatile Gold and *Luna* out of the Earth, and of perfecting it, thou hast no reason to hope of finding a more compendious way than that is which I have here exhibited unto thee.

You may leave such Metals (or Ores) as have in them plenty of *Sol* and *Luna*, unto others; and take only the scoria as 'twere, and thencefrom extract your part, and none will forbid you that. But if so be thou canst be but a partaker of an aureous Earth (or Ore) then will all things fadge the better.

NB. The ☉ and ☽ that is in the Extractions may be precipitated by the help of ☿, but much more chargably and more difficultly than by ☽ or ♄, because the ☿ used in this operation cannot be used a second time.

NB. The ☉ and ☽ may be also extracted from the water without precipitation; by abstracting the *Aqua-regia* from the ☉ and the *Aqua-fortis* from the ☽: but besides this kind of proceeding being full of Labour, we should receive but little fixt Metal, and scarce the one half of what is gotten by the aforementioned way: For the ☽ and ☉ do retain with them some part of the *Aqua-fortis* and *Aqua-regia*, and thereby become sharp or sour which is a thing contrary (or an Enemy) to all Fluxes, and which also does not only cause an evaporation of such Volatile Gold and Silver as is therein, (but withal some part of that which is fixt too,) in the melting. But now in this Fishing trade that I have described, being caught it is either edulcorated, or the corrosive power is extinguisht by the addition of a fixt Salt; so that hereby the ☽ or ♄ holds with it self as well the volatile as fixt Gold and ☽.

NB. He that shall institute this operation aright, will find that the volatile Gold will (in the secret Reduction) yet farther transmute part of the ☽ and ♄ into ☉ by Graduation, and so will reap a double (portion of) ☉, for which God is deserved to be thanked.

I have herein been more prolix than I intended, which I entreat others to accept in good part: It could hardly be that the things I have delivered, could be couched in fewer words. Wise Men indeed need not many words, but where are such? Better is it therefore to set down things at large.

Now it follows that we shew by what means we may have benefit out of the edulcoratory Water, and not be forced to throw it away.

WE have taught in the precedent discourse, how those waters which ☉ is extracted and precipitated with, may be used for a farther extraction of ☉: For when the *Aqua-fortis* in which ☽ or ♄ is dissolved is mixt with the *Aqua-regia* wherein ☉ is dissolved, there ariseth not any mutation or changing, but that ☽ or ♄ only which was in the *Aqua-fortis* settles to the bottom, so that this water wherein such a precipitation is made, may afterwards serve instead of *Aqua-regia*, and so consequently with it may ☉ be extracted out of the Metals.

But seeing that the precipitated ☽ or ♄ must be excellently well edulcorated by often pourings on of water, afore it be dried, hence it comes to pass that there is gathered a vast deal of such edulcoratory Waters. Now that even this may not be thrown away as useless, and that nothing may be lost in so noble a work, I have here determined briefly to declare, by what means we may likewise catch some benefit even out of that too.

To do this, 'tis necessary that the useless water be separated from the *Aqua-fortis*; now such a separation can-

not be effected in metallick Veſſels becauſe of the ſharpneſs of the *Aqua-fortis*; leaſt in length of time they ſhould be diſſolved: But to perform the ſame in Veſſels of Glaſs would take up much time and fire; there is therefore of neceſſity another way here required to perform the ſame; and a better than this, which I will here deliver, I think can hardly be contrived. Make you therefore an Arch of Lime, Aſhes, and Horſe-dung, according to the afore preſcribed manner, where we treated of making Salt-petre (about the beginning of the book) dry it by putting fire thereunder, *&c.* The Arch being dryed, pour on, by little and little, ſo much edulcorating water, as the Arch is capable of attracting, and until you ſhall find it to be made thoroughly moiſt; the Arch being on this wiſe moiſtned, dry it again: and being dryed moiſten it again as afore. and ſo repeat this work of moiſtning and drying ſo long till the Arch will receive into it ſelf no more water. This done, there remains no more, but to do thus, *viz.* Let the ſaid Arch be broken to pieces, and be ground with a Mill into fine powder; upon the powder let be thrown fair water, and ſo let there be made a Lixivium, out of which by due boiling may be made moſt excellent and delicate Saltpetre.

But here muſt be very good heed taken, that you uſe about the building of the Arch, Wood-Aſhes, and Lime made of Stone (or Chalk); whereby the ſharpneſs of the edulcoratory water may be extinguiſht (or mortified) by the fixt Salt inherent in the aſhes and lime, and the corroſivity be taken away, and moſt excellent Nitre may ariſe thencefrom; for if *Aqua-fortis* be permixt with the fixt Salt of wood-aſhes, both of them loſe their Nature, and Nitre is made thereof.

But that the operation may more luckily ſucceed, and we may be the more certain of the event, it will be the beſt way, to put in, by little and little, ſome Lee of wood-aſhes firſt of all, (afore the edulcorating water be thrown upon the Arch) and this putting on, to be ſo long continued till all ebullition and noiſe ceaſe, whereby all the ſharpneſs of that water may be taken away; this done, that water is to be poured upon the Arch, and you are to proceed on according to the afore-preſcribed method; and ſo ſhall you have excellent Salt-petre, whether your Arch be made of Lime and Aſhes, or of Mud and Aſhes.

NB. If this taking away of the ſharpneſs of the edulcoratory water by the benefit of a wood-aſhes Lee, be not finiſhed, and done before it be poured upon the Arch, it is clearly requiſite that it be done in the Arch it ſelf, by the goodneſs of the Lime and the ſaid aſhes, by which that ſharpneſs may be extinguiſhed.

It is, I confeſs, all a caſe whither that ſharpneſs be extinguiſht with a *Lixivium* afore; or elſe be done in the Arch it ſelf. Yet nevertheleſs, ſeeing that Operation is the ſafer which hath a foregoing taking away of the ſharpneſs afore it be poured on the Furnace, therefore it is better ſo to inſtitute it; ſpecially, ſeeing it then matters not at all any thing, what condition the matter is of which the Arch is made with; becauſe then ſuch a water needs no more but an unfolding (or evaporation) and coagulation, and this may as well be done by the help of an Arch made of mud, as by one made of Lime: Otherwiſe if the ſharpneſs of the edulcoratory water be not taken away by the *Lixivium*, an Arch made of mud is of no uſe, for by this means you would not get any *Salt-petre* at all, but rather all the water would be conſumed by evaporation, which need not be at all feared, if we uſe an Arch made of Lime and Aſhes, ſeeing that that water is by this means mortifyed.

And ſo, by this means, that edulcoratory water may be moſt commodiouſly prepared for farther uſes, and the Salt-petre which is extracted thence, is exceeding good to make *Aqua-fortis* with; and we may gather as much in quantity thereof as the extraction of ☽ and ☉ out of the Metals, Stones, Clay, and Minerals requires.

NB. If any one be deſirous of more excellent benefits, let him diſſolve, in that edulcoratory water, (*B.*) or (*C.*) and in the Lixivium (let him diſſolve) (*D.*) then mix both Solutions: When the fermentation is over, he will have double the quantity of Nitre, than what he would otherwiſe have from the bare mixtion of the contraries together, and pouring them on the Arch; the reaſon of which thing is this; becauſe (*E.*) is nothing elſe inwardly but Nitre, but it cannot come forth to light before the body be broken, and till that ſalt which ſticks (or lies hid) within, be wholly freed (of its bonds) whereby it may be turned, together with the Corroſive Spirit into Nitre.

The like is to be underſtood of (*F.*) becauſe even that alſo is broken (as I may ſay) to pieces by the Lee of the wood-aſhes, and ſo the Salt that lies hid within, and which is nothing elſe but Nitre, ſhews it ſelf to ſight, and paſſeth with the other Salt of the Lixivium into Nitre.

Certainly this labour, *viz.* the mortification of the edulcorating water by a Lee of wood-aſhes, and the concentration of Nitre, upon the Arches made of lime or mud, is an egregious invention; nor do I think that this buſineſs can be better managed any kind of way, than by what hath been here ſhewn, eſpecially if the Species, here notified, be alſo thereto adhibited (or made uſe of) (I know not I ſay, any way) by which greater plenty of Nitre may be gathered; for the coagulation cannot be done in a Copper or Iron pan, becauſe not only the Pan would be corroded and waſted, but the Nitre would be rendred impure. But if now the operation be inſtituted aright, we ſhall get more Niter than indeed is requiſite for the extracting ☉ and ☽ out of the Metals; ſo that we may get us ☉ and ☽ withot any coſts: which invention verily is a moſt noble one even in all parts of the World, and a moſt high gift of God: for which, we have good reaſon above all things to render Him deſerved thanks, and next Him, to thoſe who open ſuch a Noble and Unheard-of Invention, and which is ſo profitable to all Men.

But this Invention will be eſpecially profitable in thoſe places of the World, where *Aqua-fortis* is much uſed, and is preſently after the firſt uſing thereof, thrown away as unprofitable, as it uſually happens in the Mint houſes, where abundance of ☽ and ☉ is ſeparated in great quantity, and conſequently abundance of *Aqua-fortis* conſumed, ſo that by the benefit of this invention of mine, we might get much every year; but moſt of all in thoſe places where are found ſuch Stones and Sand which are endued with Gold, but yet will not yield any by the help of the uſual melting.

Beſides too, this invention is exceeding profitable for ſuch kind of Metals of ☉ and ☽, that have not as yet gotten their due ripeneſs or fixity, and ſo fly away in the melting, and yield either none at all, or at beſt but very little of Gold. For the common melting fire forceth away the Volatile Gold, and ☽ that reſides in the Metals (or Ores) which is not at all ſo here, for all (of it) is made fixt by the *Aqua-fortis*, and preſerved.

I do believe that there is not a place to be found, where ſuch kind of Stones, Sand, or Clay may not be gathered, as hold in them Gold and ☽, either fixt or Volatile, and which may be extracted thencefrom moſt eaſily, and with exceeding profit according to the way aforeſpoken of.

But, for as much as there are many, who pretend that ſuch like Stones, Sand, Clay, and Minerals as have Gold in them, are no where to be found, and that conſequently this invention of mine is altogether in vain: To ſuch as theſe I thus apply, *viz.* That ſuch like Subjects are therefore unknown, becauſe few there are that ſeek after them, or are willing to experience ought, but remaincontented with ſuch things only as the Ancients have taught, and perſwaded themſelves that ☉ and ☽ cannot be

be separated out of the Metals, but only by the force of fire, where as notwithstanding the operation may be far easilier, and more profitably instituted, according to the method by me prescribed, but especially in those Metals (or Ores) of ☉ and ☽, which either require too much expence for their melting, or are as yet unripe and volatile, and so fly away in the melting; for a great quantity of ☉ and ☽ may be extracted with a little quantity of *Aqua-fortis*; yea the extraction being duly made, and to the best profit, there may be thereof made Salt-petre; so that such an extraction of ☉ and ☽ requires but very little costs.

If any one desires an easier way of extracting ☉ let him use Spirit of Salt prepared after the manner by me delivered, which said Spirit he may fortify by adding a fourth part of Salt-petre, which very same (when the Extraction is finisht) may be reduced into Salt-petre, like as we have said of *Aqua-fortis* that hath been already used.

NB. An easier operation yet then all these, is this, which may be performed the dry way.

Take the Metal, Stones, or Mineral, reduce them into powder, mix them with the Salt (G) and make them with clay into Balls about the bigness of a little Head. Make these balls red hot, and by this means the Salt will dissolve the *Sol* in the Fire, and attract it out of the Metals. This done, grind the Balls or Pellets, and extract thencefrom in a large Pot or Vessel a Lixivium with boiling hot water, for the Salt which hath attracted the ☉ in the Cementation, mixeth it self with the Water: Out of this Salt-water mayest thou afterwards catch the ☉ by the help of a solution of ♄, added for the precipitation; now out of the Salt it self mayest thou make excellent Salt-petre. So that you may most easily extract out of the Earth both fixt and volatile ☉ and ☽ without any melting it. Nay not only ☽ and ☉ but even Copper too, whether we proceed the dry way or the moist way: For we may extract good *Sol* out of the scoria of *Sol* and *Luna* and *Venus* which are cast away, yea and out of *Mars* it self too, and by the afore-shown way.

NB. The reason is this, because the Iron being purged in a strong Fire is heapt up as it were into goldenish Scoria which but few know of, and will believe, though it be most true. For when a Metal is so burnt with such a vehement Fire as to resemble glassy Scoria, it hath gotten to it self a more noble nature, and thenceforth is able to exhibit or yield good *Sol*: Yea though they be the Scoria of ♀ or ♂, which thing that excellent *Metallurgist Isaac Hollandus* did also know, when he said, *If any one makes ☽, ♄ or ♂ into Glass, and reduceth it, it will not be ☽, ♀, or ♂, but ☉: And if any one shall turn ☉ into Glass, and then reduce it, it will not be ☉, but Tincture.*

Nor was this knack unknown to *Bracescus*, who taught the making of the Philosophers stone out of the scoria of Iron, but he is laught at, by another Philosopher, though undeservedly. Though I do not know the way of extracting the Tincture out of Iron, yet this I know; that there have been many who have extracted good *Sol* by *Aqua-regia* out of the very green Scoria of Iron, when notwithstanding, the ♂ it self out of which the *Scoria* came was destitute of Gold; the cause whereof we showed but now.

Now if they had but known my invention of most easie preparing a convenient Menstruum for the extracting of the Tincture, and then the manner of afterwards separating the *Sol* again, without losing the Water, certainly they would have been able to perfect that Extraction with a great deal of benefit, whereas (not having this) they only beheld the possibility of the thing without profit.

For if this Labour be instituted according to my invention afore-written, we may extract the *Venus* (which commonly is in the poorer Minerals) out of them, and that with much profit and in great quantity, and the extraction being made, (whether it be done the moist way or the dry) we may by the benefit of the solution of ☽ or ♄, get out the ☉ thence whilest it is yet mixt with the water, yea and afterwards by the benefit of ♂ the Copper it self. He now that well understands the reason of this Fishing and reduction needs not to search after the Metals (or Ores) of *Sol* and *Luna*, for whatsoever Metals (or Ores) of *Venus* contain but even a very little portion of them, will be able to furnish a man with necessaries sufficiently enough.

But that the Reader may not think that these sayings of mine, *viz.* that there are subjects to be in all places found that are endued with Gold, are fictions, and are not founded upon any experiments, (for I doubt not but that abundance will not only account these sayings for falsities, but deride them too) I thought it not much from the purpose, if I shewed some little place only, where you may find such Metals (or Ores) as are endued with Gold, which notwithstanding were never brought into use, that so it may hence appear that such Golden subjects must be likewise found in many places.

Let us therefore cast an eye to a part of the *Mhene*, and let us get out those Treasures that are there hidden, and at present are not profitable to any, which nevertheless may be of mighty conducement and benefit to the whole Inhabitants of those parts.

The *Mhene* is a River most abounding with Boats and Fish; it hath its rise out of a very high pine-bearing Mountain, it is in some sort conjoined with three bordering well known Rivers, *Sata*, *Adrana*, and *Nava*; which again spread themselves unto the ¼ quarters of Heaven, as *East*, *South*, and *North*. (*This piniferous Mountain is not barely one Mountain, but consists of many which are exceeding full* of Pine-trees, Beech, Oakes, Birch, *and other Trees set very thick together, and so yields an Harbour for both wild and tame Beasts.*)

This Pine-bearing Mountain, and which is the highest in all *Germany* (and of which *Gaspar Bruschius* wrote a particular Treatise, which is exceeding profitable for such as study metallick affairs to read,) is stored with many notable Metals (or Ores.) For there was not only Gold digged out plentifully in various parts of that Mountain, many years since, (and thereupon there's a City called *Goltgangh* by the *Germans*, as if you should say a Vein of Gold:) But withal the other more common Metals that lie here hidden do for the most part all of them contain Gold, with notwithstanding is not at this day by reason of the ignorance and unskilfulness of Men separated from them. Nor are the bare Metals only of that place all of them endued with Gold, but almost all the Earths, Sand, and Stones have *Sol* in them. Yea even in this time even Antimony the first *Ens* of Gold is digged out in that place. Therefore it may most easily be proved, that this Mountain out of which the *Mhene* flows for th is stuffed with *Sol* both in the outside and inside parts, with which proof I must at present in this place rest, least I should be too tedious. All such as are skill'd in metallick Affairs do well know, that all the metalline Ore, that they get in and about this Mountain, is endued with Gold.

The most studious searcher of nature *Mathesius* in *Sarepta* testifies that he saw an Iron Stone or Ore endued with Veins of fixt and malleable Gold.

The afore-praised *Gaspar Bruschius* in the description of this Mountain, mentioneth amongst other things, that in a little Town called Einsiedel, situate near the said Mountain, was a Tin-mine heretofore found, by the Treasures of which the aforesaid little Town was built. There did a certain Metal-man called *Sigismund* Wans learn from an *Italian* Woman, whom he married after the death of her former Husband, how *Sol* was to be separated from *Jupiter*: From whence he got him so much riches, that even afore he died, he caused an egregious Hospital

ſpital to be built; and withal contributed thereto many thouſands of Crowns, with which twelve ancient Men, and three Prieſts ſhould be always nouriſhed; to the performance of which there is verily a great deal of Gold required yearly.

This now is not to be at all accompted as a meer fable, but the very pure truth: For in that edifice, the Effigies of the Founder *Sigiſmund* Wangs, and the Foundreſs *Barbary*, are yet to be ſeen even at this very day. Of which likewiſe *Matthew Merianus* in his Deſcription of *Franconia*, maketh mention. But it is ſufficiently enough evident (beſides theſe Teſtimonies) that this Mountain is repleat with Metals (or Ores) and eſpecially with Golden ones, both within and without, and hence aroſe that Proverb of the ancients, *viz.* That the Country-man doth in this Pine-bearing Mountain oftentimes throw a ſtone at an Ox (or Cow,) that is more worth than the Ox it ſelf. Strangers give credit hereunto, as *Italians* and others, and do yearly viſit this Mountain, and dig the Gold out of thoſe places where they know there lies much hidden, and take it up at their backs, and carry it away with them: And many ſuch there have been with me, who have afforded their help to ſtrangers in digging out Gold: Who foraſmuch as they knew not the manner of extracting it (and that they underſtood by others that I alſo dealt in Metals,) brought me various kinds of Earths, Stones, Sands, Clays, that I might try whatwas in them: and they did all of them abound with Gold.

The Country-men that live about that Pine-bearing Mountain do daily for Gaine's ſake carry ſuch earths and ſtones, endued with Gold, unto *Norimberge*; which one or other likewiſe buys, extracting thence by melting excellent Gold.

But now if ſo be theſe men did but know the extraction of ☉ by the help of *Aqua-fortis* only (without melting) out of the earths and ſtones (as is here taught): the needy Country-men might live like the richeſt Citizens, the Citizens like the Nobles, and the Nobles like Princes; which ſeeing it hath not ſo pleaſed God (to have it) all (theſe) things have remained hidden. Every one may eaſily believe the things I here utter, ſeeing it is already taken for granted that this Mountain doth abound with egregious Metals (or Ores) and eſpecially with Golden ones. Upon this accompt therefore the moſt Noble Marqueſs of *Arſpach* who is Lord of this Pine-bearing Mountain hath prohibited any Foreigner from exporting ſuch Earths (or Ores) thence for the time to come; and though he hath thereby done ſomething to it, yet he cannot wholly hinder it, foraſmuch as that Mountain is too vaſt and large.

But now when I paſs down from this pine-bearing Mountain along the *Mhene* downwards, to ſuch places as are more plain (or even ground) where Wine and Corn grows, there's no body ſeeks after *Sol* and *Luna* there, but each man profeſſeth himſelf well enough content with the Wine and the Corn, nor hath there been any Metal digged thence or there ſought for many years: Becauſe they thought that no plains can produce Metals, which thing I judge to be falſe, and do gain-ſay it; and contrary-wiſe affirm that there are ſome parts in plains, that as to the production of Metals may be compared with the moſt high Pine-bearing Mountain. Now, elſewhere there ly high Mountains of each ſide of all the *Mhene*, out of which there comes a mighty quantity of Wine, but the Metals ly hid to all.

Beſides theſe, I my ſelf tried, that there are Ores of all kinds to be found on both ſides the *Mhene* throughout all the Eaſt of *Franconia* even to *Maguntia* where the *Mhene* runs into into the *Rheine*, but yet as far as I know, there is not any Metal anywhere digged but Iron only; and therefore neither can I poſitively ſhew and direct to ſuch or ſuch Mine-pits, out of which you may apparently get Gold and Silver, but as is ſaid, there are every where found ſome footings (as 'twere) that contain Gold and Silver, and that ſuch Stones in the *Mhene* are rarely without Metal: But no body proves or tries them, or puts them to uſe.

At *Bamberg* (which is an Epiſcopal Metropolis) men are become more diligent, inſomuch that they have found out ſeveral places wherein is to be had the Metal (or Ore) of *Sol*: Such as this Metal (or Ore) of *Sol*, hath been very oft-times brought me by the Inhabitants of that City, but all of it in a manner did contain a fluxile and immature Gold, which cannot be extracted by the common way of melting, but vaniſheth away into the Air, and ſo I did not at that time much eſteem it, but left it as an unprofitable Ore. But now I have found that ſuch fluxile Metals (or Ores) of *Sol* may be brought in uſe, not by the help of a vehement melting, but only by a nitrous Water, in which this kind of fluxile Metal (or Ore) of *Sol* is fixed in the extracting it, and then ſtays in the melting, and yields perfect *Sol*.

Concerning ſuch a fixation of fluxile *Sol* in ſtones, by a nitrous Water, I did not at that time know it, otherwiſe this knowledge of mine would have been extraordinarily profitable to the Inhabitants of thoſe places. Yea and the Biſhop of *Bamberg* himſelf who is a great Lover of the Metals gave me ſome proofs of his Clemency for ſervices of no moment that I did him, ſo that I would then gladly have beſtowed my utmoſt power in lieu of his favours, but nothing could be effected by the way of melting, becauſe of the volatility of ſuch a Metal. But now there may be gathered very conſiderable Treaſures by the benefit of nitrous Water. For not far from *Bamberg*, there is found a Stone of great bigneſs that is exceeding full of Granates, which are about the bigneſs of Millet or Hemp-ſeed: Beſides too, all the Mountains of that place do moſt plentifully abound with Metal (or Ore) of *Sol*.

There is ſuch a Vein of unripe Gold, not far from *Bamberg*, that lies thwart the *Mhene*, which much hinders the Veſſels, and eſpecially thoſe Boats which are wont to bring vaſt quantities of Boards, Beams, *&c.* yearly; inſomuch that they cannot always get over it, but at ſuch time only when the waters are increaſed. Now in the Summer time, when Rain hath not fallen awhile, this Vein is ſeen bare, when the water is fallen away ſome Ells height; and hereupon the Mariners have ſmote againſt it with force, and Tools therreby to remove it, if poſſible, but all in vain.

But for as much as I never was minded to run thither, nor yet am ſo conditioned, as that envious Dog, who having hay under his poſſeſſion, could neither eat it himſelf, nor would ſuffer the Ox to eat the ſame; therefore I was willing to lay open theſe things: I eannot at preſent ſay any more of this fluxile Ore of ☉; yet if any one deſires more, let him repair to an Inhabitant and Citizen of *Bamberg*, by name *N. N.* a Farrier, who many times delivered to me that kind of ore during my aboad at *Kitzing*. This man will ſatisfy every ones requeſt, and will ſhew where it is to be found.

There have verily been others that have brought unto me various kinds of Ores; but I have long ſince forgotten their names. If you only ſeek, you will find in that place, abundance of ſuch Golden Metal (or Ores) but all of them in a manner, fluxile (or crude,) and poſſeſſing but little fixt Gold, and although they ſhould not have in them any fixt ☉, and that not any thing could thence be extracted by the way of melting, yet notwithſtandging it is now known to *D. G.* by what means (by the liquid way of Nitrous water) all the fluxile (or crude) ☉ may be abundantly extracted out of the ſtones, be fixed, and be turned into good ☉ with abundance of profit.

The *Mhene* near *Bamberg* is occupied with Veſſels or Ships, and I my ſelf have ſailed along the *Mhene*, and on both

both sides of the *Mhene* from *Bamberg* even to *Wirtzberg*, did light upon various kinds of Metals (or Ores) which were not void of ☉ and ☽, out of which much ☉ and ☽ may be extracted by the help of this invention of mine, by the moist way by Nitre water, if men would but only apply themselves to the work.

But indeed the Corn and the Wine which God hath so abundantly vouchsafed to those Countries, is the cause that no body minds any thing else, for they have enough to suffice them, and therefore leave the Metals (or Ores) of ☉ and ☽ untoucht.

Without doubt, the whole Wood that reacheth from *Wirtzberg* or *Kitzing*, even almost to *Bamberg*, is full of Metals (or Ores) and yet (as far as I know) there is not digged any of the Metal (or Ore) of *Sol* or *Luna* therein.

It is reported that there was *Sol* and *Luna* digged up heretofore at *Cassel*; at the other side of the *Mhene*, towards the Town which the *Germans* call Koningshoeken, in the Mountain they call Hasbergh, there was heretofore, Copper digged, which now is left of, because the Copper is not fusile enough, nor hath it any sulphureous flint joined with it, by the help of which it is made fluxile (but is) inclosed in a Sandish Stone. Now out of 100 weight of this, there can hardly be extracted, by the help of a strong melting fire *iiij.* ℔. for the Sandy Stone being destitute of a sulphureous flintiness, doth in the melting turn the Copper it self together into Scoria; yet notwithstanding we are able by the help of Vinegar to extract above *xij.* or *xvj.* ℔. of Copper, and this I have tryed more than once. But whether or no that Metal (or Ore) of Copper, contains in it any Volatile Gold, I never tryed, but that there is some ☽ therein, is true; yea, and the Copper is very malleable, and we can thence extract by the help of Vinegar, that which is most fair, and this I humbly declared to the most noble *Moguntine* Elector, he being at this time Bishop of *Wirtzberg*; but by the Tryers (or Refiners) of that place, it is haply accounted of as unprofitable because it yields but little by the help of Fusion.

I must needs confess that but little can be gotten out by melting, but such Copper may be profitably extracted by the Acetum of the Wood, which Grows in the places all about in abundance, and may be had for nothing.

The *Mhene* doth every where yield such kind of Flints as are endued with Gold. Near *Carlstadt* there offers it self in a Wood a certain white and fat Earth, and after some sort silverish, otherwise firm (or strong,) and is fit for making of Crucibles, and other Instruments (or Vessels) to be used about the Fire.

You may likewise find such conditioned Earth at *Klingenberg* upon the *Mhene*, where most excellent Wine grows, which the *Glass-makers* of *Spechart* use to make the Crucibles or Pots in which they melt their Glass.

It hath not as yet been known that there hath been any Ore found in the County of *Wertheimen* where great plenty of *Russellein* Wine is gathered; yet nevertheless I have proved several Earths, which I found about *Breiberg*, which is the inexpugnable Castle of the Lord *Charles Ferdinand* the Count of *Wertheimen*, in which I found there was contained much Gold.

Besides these, I found opposite to *Wertheimen* where there are Vineyards, an Iron stone (white like snow, covered over with other stones,) which is endued with ☽ and ☉: as to the external shape it resembles a white Flint, very weighty, so as that it scarce yields to the weight of a piece of Iron of like bigness: But it is nothing regarded, and is accompted of as a common stone.

The County of *Erbach* doth indeed yield plenty of Iron, but there is nothing at all found of other nobler Metals; yet my opinion is, that even in this Iron are contained both ☉ and ☽: because that there is sand found in several places thereof which yields good Gold, as I have observed more than once; the extraction of which may be excellently well performed by the benefit of Saltpetre.

Likewise Talk of sundry kinds is found in the said places, which is endued with ☉ and ☽: and it would easily yield them forth, were it but rightly handled, and dealt with according to the way by me prescribed: which hitherto we never heard to have been done by any.

The County of *Erbach* and likewise of *Wertheimen* do abound with Iron Metal (or Ore) and all kinds of Minerals, which contain in them, ☉ and ☽.

Nor are the Metals (or Ores) of less goodness that are in the *Specharten* Wood, and the bordering Countries; and yet notwithstanding 'tis evident that it yields nothing at all save this, *viz.* That there is excellent Salt made there and Glass, in great plenty. It is a thing well enough known to all men that here are various Metals (or Ores) found, but never hath any so procured as to have them wrought upon, and thereby to enjoy them.

We find in several places, an Earth impregnated with white, black, and yellow Talk, especially (in that part) which is near to *Aschiburg*, and which contains both ☽ and ☉: which notwithstanding by reason of the smalness of the quantity thereof have never hitherto been thencefrom separated.

Not far from a Village which the *Germans* call *Schiltkrop* there offers it self a stony Talk, somewhat ruddish, which besides Copper contains also volatile ☉, and of no use at all because there's but little ♀ therein contained, and that the ☉ is volatile and cannot be obtained by the means of melting. Perhaps this Talk was known even of old time, for the place where it is found in plenty is by the Inhabitants of that place called the Gold-pit even to this day: for it is not incredible but that there was Gold found there.

However there is not at this time any extracted out of that Talk. I have very often extracted thence most beauteous Verde-grease by the help of destilled Vinegar. For seeing that there is plenty of Wood to be had in that place, and consequently requires no costs, we may get us vast quantities of Acetum *gratis*, (or for nothing): and by the help thereof extract the Copper out of the said Talk: Verily many noble Men would have (thencefrom) whereon to live honourably.

NB. But if we make a Spirit of Salt, and with it being fortified with a fourth part of Nitre, extract the Copper and the ☉ out of the said Talk, and then first catch the ☉ by ♄, and then precipitate the ♀ by ♂, we shall not only have very malleable Copper, but shall likewise receive even pure ☉; and this I testify upon my own knowledge.

He that hath determined the experimenting of these things, and yet sees that he does not rightly perceive the things we have here mentioned, I advise him to come unto mein a friendly way, and I will not be wanting unto him to serve him and the Country by any farther information.

Verily there lie hidden incredible Treasures in those places, which none know of, and which yield nothing at all by the help of Liquefaction, and which we are constrained if we would have them fixt and metalline to make them so by the benefit of a sharp Water, and this I was willing to open and notifie for the Countries sake.

O thou Zoilist or Carper that understandest not this knack, pass not thou thy judgment hereupon, but rather examine thy Wines, and tell us which is best, either the *Heubachen*, *Klingenbergick*, or *Wertheimen* sort: Verily neither of these Liquors though they are strong, are convenient for the extracting of *Venus* and *Sol* out of that Talk: There is a far stronger required, to wit, some nitrous Spirit of Salt, or Spirit of Nitre acuated with common Salt. When the extraction is ended there may be gathered plenty of Nitre out of the remaining Menstruum. Insomuch that there is nothing else required but labour, for the costs expended on the work are not at all considerable: And thus in a little space of time, we may get a great quantity of Copper and *Sol*.

After the same manner as we have shown that it is a

thing possible to extract Volatile *Sol* by the help of Salt-petre out of such a disregarded Talk and other Stones, and to make it fixt, so we can also extract the same out of several other Minerals, that are plentifully enough lying on both sides of the *Mhene*. So that now, no body hath any ground to say that the Ores cannot be found in this or that Country, or such convenient Minerals, as out of which we may extract the volatile and also the ripe Gold acording to *Glauber*'s prescription.

If now such may be found in those places that are adjacent to the *Mhene*, which we always judged to be void of such treasures, what shall we not find in those places, which have already yielded us various kinds of Metals for some hundreds of years successively, and do yet daily exhibit them; such as as are *Hassia*, the Dukedom of *Brunswick*, *Saxony*, *Thuringia*, *Moravia*, *Bohemia*, *Hungary*, and that such like parts of the Earth abound with Metals. Therefore, Friendly Reader, do not thou perswade thy self that there is any place in which we are not able to extract many good things out of the Earth.

I have likewise found various Metals in our *Holland*, and yet never, did any one ever hear that there was the least particle of them therein found, especially in that place that they call *Velauw*; yet notwithstanding it yields Veins of Iron, and a Yellow Sand which hath in it ☽ & ☉.

Neither doth that, place afford only such Sand Stones, & Earth, out of which volatile ☉ & ☽ may be extracted, but withal there offer themselves at the Sea-shore in those Sand hills, which the *Hollanders* call *Duynen*, which the stony Sea heaps up, Stones of a Sky colour, which contain ♀. They are called by the *Hollanders*, *Ultramarine*.

In this place, is likewise gathered plenty of Ostiocolla it is about the length and thickness of ones Finger; yea and sometimes is as big as ones Arm; and as in a clear Season it is easily noted, (or met with) so in a Rainy Season it is not to be seen: It is in some sort hollowed in the inside; it is of a white colour, like stone-lime, and thereupon the Chyrurgions use it to consolidate the broken bones of their Patients.

Some (as they have related to me) have extracted ☽ thereout-of. There is not therefore, any place that does not contain some Metal, and especially ☉ and ☽.

Thus Friendly Reader, you see that there are in all parts of the Earth, such Subjects, as do contain, if not fixt, yet at least wise volatile Gold; insomuch that no body may on good ground, complain that nature hath denyed him ☉ and ☽, so he but knows how, and be willing to extract it.

Did *Germany* but know those Treasures which the Earth contains, and did use them aright; certainly they need not give place to the power of any Monarch. But it seems as if God had cast a blindness upon men, or at least keeps them blind, even until the due time approacheth of helping those that are his.

I have here shewn the way for the Country to get riches and power by; but as concerning the way by which we may extract both the volatile and fixt Gold out of Stones, Sand, and Clay, without any considerable labour & costs, acccording to this invention of mine; I will shew it in my Laboratory, which by Gods permission, I have begun to erect for the sake of Friends.

But whereas I have omitted some words in the description of this invention; you are to know that it was done upon this account; least otherwise such a noble Artifice should fall into the hands of my enemies; I will never be wanting to illustrate (or explain) such things as are somewhat more obscure, unto my friends. The main things are delivered clear enough, to such as are in any measure skill'd in Chymistry, but the unskilful may not hope for any thing else (thereby) but labour in vain. The thing in it self is easie, and without rubs, so as that any one who hath but once seen the way, may understand it, and manage it.

I could have exhibited the things I have delivered, in a briefer stile, but upon consideration of the common good I would not; he that cannot from these things perceive and learn ought, let him think that God is not willing to vouchsafe him the Grace of understanding them.

And now, if I had been minded to have exalted this work with mighty praises, I should not have done unseemly at all, for as much as this labour shines even in the dark, and makes many doubtful things firm and clear.

For by the means of this labour, we may get us, not only abundance of ☉ and ☽ very easily, but likewise most excellent medicaments, and which are not to be accompted common; nay, even the off-drawn Salt-petre it self, is a most excellent medicine for all Vegetables, because it is capable of multiplying them abundantly, in so much that he who is skilful in this kind of work and does not forbear from setting about it, will never want any thing.

What greater things can a man desire from God, than a sound Body, daily Bread, and as much ☉ & ☽ as necessity requires? now these gifts of God do abundantly flow in upon us by this labour; if it were not for the wicked Farnerianists who are not worthy of any good thing, and do contemn every thing that they understand not, and (so consequently) restrain me from treating of these things, with any longer and clearer discourse. The whole world would be amazed to see the so exceedingly easie method of bettering of the Metals, and of making them perfect, and which method but few there are that know. But whatsoever we have omited here, shall, God willing, be shortly delivered in my work of ♄, where we will demonstrate by what means ☉ and ☽ may be extracted with exceeding profit out of vile (or common Lead, so that we need not any other subject, but Lead and the Salt of the Earth or a Mineral fire (by whose help, nature bringeth (or advanceth) all Metals to maturity) for the performing this work; and hence the word Alchymy (which signifies nothing else but the melting of Salt) seems to have taken its original.

He therefore that knows how by the help of Salt, to make Metals volatile, and again fixt (which is not to be done but by solution and coagulation) such an one knows the true and unsophistcate Alchimy, and follows the universal exhortion of the Philosophers, where they say, *Make the fixt Volatile, & the Volatile fixt, Dissolve & Coagulate*, &c.

He that hath in any measure meddled with Salt-petre, easily perceives what my meaning here is, and what I drive at. He whom Nitre obeys, him do all things else obey. I have determined (by God's permission) to erect a Tryumphant Chariot for Nitre, & to set it thereupon, as the greatest Monarch of the Word & to exhibit it to the ignorant.

Whereas now I had written down this most noble way of compendiously extracting volatile and fixt Gold out of Stones, Sands, and Earths, and of farther augmenting other ☉ and ☽ thereby, I found nothing pretermitted of what may any waies help to the profitably accomplishing the Work, save this, *viz.* Whence such aureous Subjects are to be taken, out of which we may extract volatile and fixed *Sol*; or by what means they (*viz.* ☉ and ☽) may be prepared by such like labour in great quantity.

To satisfie such as these I neither will, nor can deferr it. So then, as touching the Golden Materials, there hath been enough shewn already to prove that they are every where to be found, and put case there were none to be found, is there not a Golden Silver every where to be found, and that Silver may be separated from the Gold, be Cemented, and again made aureous, as often as one shall please. Yea, and Gold may be profitably extracted out of a certain (sort of) Tin, especially the *Geyersbergick*, and so likewise out of some Iron too.

Now that such, (*viz.* Gold) may be made in great quantity we may dissolve the ☉ that sticks in Stones, with Spirit of Salt, acuated with a little quantity of Nitre; for such a spirit will not be so costly as Nitrous water is,

and

and besides this too, it will (after it hath been used in the said separation) yield excellent Salt-petre, of full as much price and value as the Spirit of Salt it self was of. So that by this means we may extract the ☉ without those costs (too): And this moist extraction may be excellently well well performed in a Vaporous *Balneo*.

But if we seek after the dry way (of doing it) then the Stones are to be mixt with Salt and a fourth part of Nitre, and being mixt are to be made up into little balls by the help of some fat Earth, so as to stick together: Then are they to be dried in a peculiar Furnace, or else even in the open field, with a Fire of Wood, the which may be done in ones hours time. The Cementation being made, they are to be powdered, and out of the powder is a Lixivium to be extracted by the means of Water, and you shall have the ☉ permixt with the Lixivium, which is to be thence extracted by the help of the solution of ♄, out of the Lixivium may Nitre be afterwards made. And now by this means may a most easie and no ways costly operation at all, be instituted with some hundreds weight.

But as concerning the melting and reduction of the ♄ which contains in it the ☉ which it caught, it may easily be done, but 'tis by the benefit of a peculiar * Tigil or Pot, the making of which is known only unto my self; which said Tigil or Crucible lasts a long time, and doth not at all let any thing of what is thereunto put, run out, because it has its cover made of the Lute of Wisdom.

* *Mentioned in the Second* Century.

But now again here may arise another doubt, and it may be demanded, how we may have so much Spirit of Salt for the moist way, or so much Salt and Nitre for the dry way, as is requisite to make this extraction of the Metals. Salt-petre is chargeable, and the Spirit of Salt will be difficultly gotten in such plenty; and haply they will stand us in more than the Gold thereby extracted would be worth? To such I answer, It is not so precisely necessary to buy Salt-petre for this work, seeing that the said dissolvent when it hath done what you would have it, both in the dry and moist preparation, may be again turned by the help of common Salt and other mean Subjects, into excellent Nitre: so as we may thence have more Nitre, than it was afore. And farther, as concerning the Spirit of Salt it may be made in great plenty, insomuch that (by the benefit of one Furnace) there may be daily made 50, 60, 70, yea 100 pounds thereof, and out of every pound of Salt may you extract a whole pound of rectified Spirit of Salt with the help of two or three pounds of Coals: So that, that spirit will in a manner cost nothing at all save Salt and Coals, which doth again after it hath been put to its appointed use, yield more Nitre than the Salt and Coals cost. This operation therefore may be done without any costs as it were. The things I here mention are true, although I well know that scarce one of a hundred will believe what I say; however I matter it not, but it is sufficient to me that I know these things, and can exhibit (or demonstrate) them to any Friends.

Albeit that this be a most easie Labour and of no expences to extract volatile and fixt Gold out of Ores, Sand, Clay, according to the prescribed rule; yet I question not but that many men that are given to slothfulness will desire here, a yet easier way, whereby they may heap up a great deal of Gold without any trouble at all. To such as these, I verily could shew an easier way of extracting ☉ out of the Minerals without melting, did I not count it wholly an unbeseeming thing, to detect all these secrets both to Friends and Enemies alike without any distinction. I will not be at all wanting to communicate my more secret way to those who deserve well, & thankfully acknowledge towards me and mine, the benefit they have received.

But yet, that the knack may be in some sort manifested, and it may be somewhat known by what means ☉ and ☽ may be gotten even out of the Ores and Minerals themselves, I will a little stretch out the thred of my discourse, and will in some sort delineate the very work it self.

You are therefore to know, that all those Minerals which contain fluxile (or unripe) or volatile Gold, whether they be stony or not, do for the most part contain in them some Iron: Now then, when a man would thence extract the ☉ by the Spirit of Salt, it cannot be but that together therewith the Iron would be dissolved too, to the doing of which there is much spirit required: And albeit you may make the said spirit most easily according to the way by me delivered, yea and may besides, by the addition of some even the most mean matter again make excellent Nitre, so as that the Nitre thence extracted shall be of more value, than the costs expended about the operation; yet notwithstanding, this business is not void of all kind of labour and trouble, and it requires diligent men (not drones) of which sort there's more scarcity than plenty. But now this which we treat of at present, may a beardless Country Boy of about some 10 or 12 years old perform: It requires but little Fire, and all the (Metals) may be extracted in great plenty. Which to do, you must know that where the Metals (or Ores) are sulphureous, that *Sulphur* must be taken away by the force of the fire, for else the Spirit of Salt leaves all untoucht.

NB. However it is your best way not to force away by the fires violence the *Sulphur* out of the goldenish Flints, because that so, there goes off part of the spiritual ☉: but rather extract every such aureous *Sulphur* with a strong Lixivium made of fixt Nitre, and precipitate it with ☿ dissolved, and so the aureous *Sulphur* goes to the bottom, and is to be edulcorated, and ♄, ♀, or ☽ is to be thereto added, and so they will seize upon the volatile (Gold) and the ☉ is by the means of the Lixivium made in some sort fixt, and is to be separated by destilling of the ☿: The edulcorating waters do again yield Nitre. So that the extraction requires no costs at all, at leastwise but very little.

NB. When we have extracted the aureous *Sulphur* (by the help of fixt Nitre, or some other very strong Lee of Wood-ashes,) out of the Flints, and have precipitated it with the solution of the ☿, and edulcorated it, and sublimed it by a Retort, there is thence made an elegant (or delicate) Cinnabar, which by the addition of the filings of Silver may be changed (by Cementation) into fixt ☽ which ☽ is aureous, by reason of the volatile ☉, which was permixt with the *Sulphur*. Whereas otherwise, other Cinnabar is by this way (of proceeding) wont to yield only ☽: For the filings of the ☽ thereto added, become volatile, and vanish away into the Air, for the Cinnabar hath extracted the soul thereout-of, and hath by it made it self fixt; so that there redounds no profit at all thence-from, save only that the possibility of nature is laid open. But now when the Cinnabar of this place (or mentioned in this place) is mixed with fusile ☽, edulcorated and precipitated with Salt, or with the Calx of ♄, either alone or else both mixt together (*viz.* the ☽ and ♄) they do greedily betake themselves into each other, and there ariseth thence-from a black stone, which being kept in an apt (or suitable) Fire by degrees, and that for a due time, doth daily more and more acquire a fixity: Yet do I believe that it needs a long time, to make it wholly fixt: which thing seeing I have not as yet any experience of, I will not here mention ought of certainty concerning it, perhaps some particular Tincture may thence be extracted, because that the subjects which constitute it are excellent ones, for as *Sulphur* is said to be the Father of all the Metals, so is ☿ called the Mother. What may not a burning *Sulphur* not unlike the common Mineral *Sulphur* that is in all Metals, be extracted by Art out of any Vegetable? which (said *Sulphur*) I have implanted in mercurial subjctes more than once, and have fixed it in them; yea and by the help thereof have so extracted natural Gold thence-from.

Verily it is to be wondred at, that this science or skill hath been hitherto unknown to the Inhabitants of the world

world, and that no body hath commited the ſame to writing.

But indeed all men may ceaſe to admire, when they ſhall conſider that the Great and Bleſſed God beſtows his gifts, and the knowledge of Nature to ſuch only as it Pleaſeth him, *viz.* to ſuch as bear an humble, and pious Mind; and contrariwiſe denyeth them to ſuch as are impious and proud.

And here falls in a thing highly needfull to be known; by him eſpecially, who would effect ought in Chimiſtry with profit (and that is this, *viz.*) That there can be no bettering of the Metals at all (be it either in the univerſal or in a particular way) but by the benefit of *Sulphur* (which is the father of all the Metals) & this both in the moiſt and in the dry way. (NB. The Spirits of Salt, of Nitre, Vitriol and Sulphur, ſerve inſtead of a ſulphur though a moiſt one, and perform their office in the moiſt way.)

If therefore all the Metals were at firſt a *Sulphur* (for no Metal is there wherein it may not be found, and beſides too, it is known to be in all the Vegetables) by what means poſſibly can it be, but that being by the help of a Sulphur, Salt, and apt Fire, reduced to fixity, it (*viz.* any Metal) ſhould yield good ☉ ſeeing that it (*viz.* Gold) is nothing elſe but a fixt pure *Sulphur*. But for as much as *Sulphur* (as being of the Maſculine kind) cannot produce any Metal alone, but that there muſt neceſſarily be ☿ thereto adjoined, (as being of the Feminine kind); every one is bound to ſeek after an apt or ſuitable ☿ (as being the Female) for his *Sulphur* (as being the Male) and to join that ☿ to this *Sulphur*, and let theſe two celebrate their Nuptials in Hell, where *Vulcan* is Preſident.

Now then, when the Agent hath acted on the Patient, and perfected the operation, whether by the moiſt or by the dry way, it ſhews it ſelf to be a pure product, and ſo much the purer too, by how much the Agent and Patient were more or leſs pure.

When we ſow fruitful Seed in a fat Soil, good Fruits do thence-from proceed. Now then let *Sulphur* be the ſeed there, and ☿ the field it ſelf, yet ſo as that your *Sulphur* (or ſeed) be pure, and that the ☿ (or ground) have no Tares in it; but let it be duely endued (or dungd) with Salt, and ſo let it have the fruition of the ſolar beams, and patiently wait for the thence proceeding fruits. Now if you meet with ſuch a ſubject as hath both *Sulphur* and ☿ already joined together by nature; you are there only to begin the operation where nature left of, and ſo by the help of Fire and Salt, bring it unto its due perfection, which nature was conſtrained *nolens volens* to leave imperfect, by reaſon of the defect of Salt and fire.

I could here preſent the Student of *Hermetick* medicine, with ſuch a foundation, as out of which abundance of commodious conveniencies might be expected; but the ingratitude of the men of this Age, prohibits the divulging ſuch things.

Therefore do I herein follow *Paracelſus*, who ſaith, *We could verily lay open moſt mighty Arcana in a very few words, if it ſeemed good unto God to grant unto all men the ſame* (equity of) *Riches.*

Turn over and over his Writings, Reader; and thou wilt eaſily attain the foundation of the truth; but eſpecially, view well ſuch writings as he hath left us concerning *Sulphur* and *Vitriol*, which we will here rehearſe in this place (becauſe of the affinity of the matter) for thy ſake and benefit, which writings of his if any one can make nothing of, verily neither will he underſtand thoſe things which we ſhall add.

And now are all things (requiſite) ſufficiently laid open to ſuch, to whom God vouchſafes his bleſſing; and contrariwiſe, the ſame will always remain hidden and unknown to the impious.

Thus much I add (*viz.*) That neither can any Tincture be obtained without *Sulphur*, nor any *Sulphur* fixt without Salt; both theſe now are found conjoined in Vitriol, from which the noxious ſuperfluity is to be ſeparated, and the pure is to be made fixt.

Now follow Paracelſus *his words, concerning* SULPHUR *and* VITRIOL.

I Will preſent unto you, as one well skill'd, my experience in all reſpects concerning Sulphur, viz. *what is contained in Sulphur, both as to Medicine and Alchimy, and to other things, and unleſs God be againſt it and hinder, the operations of* Sulphur *are ſo ſtupendious and admirable, that the natural Light in man cannot enough admire them. Now if God himſelf doth not hinder, then the defect is in the workmen, that ſo handles the* Sulphur *as that the operation anſwers not to the implanted Virtue.*

Now ſeeing that every babling fellow is a Phyſician, *and every prater an* Alchymiſt, *this is the cauſe why (in plain Terms) the Sciences (of* Phyſick *and* Chimiſtry) *cannot be brought to light.*

This now is the Foundation or Baſis, viz. *That in* Sulphur *are contained ſuch great Arcana and Virtues relating to both Faculties (viz.* Medicine *and* Alchimy) *that no body can ever ſearch them out ſufficiently: I ſay, that there lies ſuch excellent Virtues hidden therein, as may very deſervedly cauſe in all Men great admiration. For after long experience gained in both Faculties, ſuch are the Virtues of* Sulphur *found and known to be, that there are not many other things that are either its ſuperiour, or which may therewithal compare in* Medicine *and* Alchimy.

Sulphur *reproves* Ariſtotle, *when as he ſaith that the ſpecies of things cannot be changed: For* Sulphur *is tranſmuted; did* Ariſtotle *live now adays he would wholly be aſhamed and bluſh.*

Thus far he, as for the many more additions that he makes every one may read them in his Works.

As concerning my ſelf, I ſay thus, That nothing at all can be done in Alchimy without *Sulphur* or ſulphureous Salts; like as without ſeed, neither Vegetable nor Animal can; as is clearly evident, be poſſibly generated. *Sulphur* is inſtead of Seed, and *Mercury* inſtead of a Matrix: But you muſt not think that I do here ſpeak of common *Sulphur* only, and common *Mercury*: [No!] I do compriſe under them ſuch as are far more excellent, and this you are well to heed. If now a metal be not ſulphureous, it muſt be brought to a due ſoftneſs by the force of Fire, which is done thus, *viz.* Making it red hot and quenching it ſome times in water. But if ſo be it is already ſoft enough, then bare powdering it is ſufficient, without ſo much as ever heating it red hot and quenching the ſame. Put this podwer in Pans of caſt Iron, and that there may be the leſs waſte of Fire, let it be encompaſſed with a wall or mured in a Furnace; fill them half full, and pour thereupon (whether it be Metal or Ore, or Sand, Stone, or Clay, or golden Mineral,) ſo much of the water which we ſhall by and by deſcribe, as the Iron Veſſel can contain, yet ſo that the ſaid Veſſels want of being top full the breadth of 3 or 4 fingers, leaſt as you ſtirr it about ſome of it ſpil over. This done, put to an hundred pound weight of the Metal or Ore, about one pound of an aureous, ſilvery, *Magnet*. Then put Fire under the Pans or Cauldrons, and make the water boil, continually ſtirring the matter contained in the Iron Pans, with an Iron *Spatula*.

Now foraſmuch as this water is of ſuch a quality as that it can neither diſſolve ☉ nor ☽, it leaves both the ☉ and ☽, and by reaſon of the admixtion of the *Magnet*, it attracts only the Iron or the Copper. When the water hath attracted as much ♂ or ♀ as it can, it is to be drawn away, and more new put on in the room thereof, and you muſt proceed on to boiling as afore-mentioned, and thus are you to reiterate this work, until all the ♂ or ♀ ſhall be extracted out of the Metal, and nothing remain behind ſave a dead Sand, which may moſt eaſily be

ſeparated

separated from the *Magnet*, by the pouring on of common Water, for the sand mixeth in self with it, and the *Magnet* remains pure in the bottom of the Vessel, which hath received into it self the ☉ and ☽: This ☉ now and ☽ is again easily separated from the *Magnet*, which said *Magnet* may be again used for such another work.

Thus now, one only person can by this means daily separate a great quantity of Metal from the ☉ and ☽ it has in it; all the artifice consisteth in the preparation of such a water as extracteth ♂ and ♀ out of the Metals or Ores: And therefore must it be of such a nature, as to dissolve neither ☉ nor ☽, & be nevertheless strong enough to dissolve ♂ & ♀ and to separate them from the ☉: For that the *Magnet* cannot extract the ☉ out of the ♂ and ♀ unless they be afore dissolved. But as touching the quality (or composition) of this water; 'tis no ways expedient to divulge it, forasmuch as the whole business dependeth thereupon, nor can any thing at all be effected without the knowledge thereof. When now *Venus* and *Mars*, or else *Venus* alone, or *Mars* alone, are extracted out of the stone (or ore) by the benefit of the said water, the precipitation of them may be made by the addition of some contrary thing, whereby it comes to pass, that not only its sharpness is taken away but also excellent Nitre may be thence prepared afterwards, which is to be separated from the *Mars* or *Venus*: The precipitated *Mars* may be reduced with a strong fire, and so it will be made fluxile, and which easily melts in a Crucible like *Venus*, and becomes malleable; yea, and of more worth than the best *Venus*, because it performs very many profitable things in Alchimy, which we forbear to speak of here, for some certain reason.

He therefore that knows such a menstruum or dissolvent, and which requires no costs to make it, and yet notwithstanding doth very well dissolve *Mars* and *Venus* (and leave the *Sol* and *Luna*): Such an one verily may in all places find plenty of *Mars* and *Jupiter* (*Venus* I believe he means) which contains plenty of both fixt and volatile *Sol* and *Luna*: neither need he be much sollicitous about Golden Metals or Ores.

Forasmuch then as the whole Artifice consisteth in the knowledge only of the water, and in the manuals (or contriving) of the placing of the *Magnet*, and in the separating all the unprofitable matters from the ☉ and ☽; he that does not know such a *Magnet* and how to prepare such a dissolvent, by whose help ☉ and ☽ may be concentrated, and ♀ and ♂ be separated from them, let him search hereafter even as I my self have done: But if so be he cannot find out or invent either of them, let him get from me what he desires to know, and I will not omit to satisfy his request, provided it may be done without my detriment and disquiet. But now you must not think that therefore I will give answers to all such as trouble me with their tedious Letters, for my time permits not the doing of such matters.

There is yet another way by which we may expect profit out of such Minerals as contain in them much ♂ if we deal with them on this wise. Let it be reduced with the strong blast of bellows, and you shall find either a greater or lesser *Regulus* in the bottom (according to the muchness or lessness of the ♂ that the stone contains) which *Regulus* compriseth in it self the ☉ and ☽ which was in the Mineral or Ore, if such an Iron be malleable, Plates may be made of those *Reguluses*, with are to be dissolved (in the Cauldrons made of cast Iron) with that secret water, out of which solution, the ☉ may be extracted by the benefit of the *Magnet*, according to the afore-prescribed manner. But if the said *Regulus* be brittle, and not malleable, then may it be granulated: Nay, it would not be much amiss to make large Cauldrons and such like Pots thereof by melting, that may be of 2, 3, or 4 Fingers thickness. Nor must we suppose that what the said water dissolves of the Cauldron and takes from it, besides that which it receives from the Plates or Granulated Iron put therein to dissolve, is meerly lost: No, for even it doth in like manner exhibit its *Sol* too; so that by this means a most rich Mine-pit may be made.

But some will say, whence shall we have such Minerals that yield ☉, and that bring such great profit? We have said before, that such Minerals or Ores containing such Iron, are every where to be found: Nor can you light on any common ♂ which has not ☉ therein, which may easily be extracted from thence, and that with most great profit. This now is known unto most (Refiners) that there is plenty of corporeal ☉ to be found in the Iron that we commonly use which (said corporeal ☉) is far surmounted (as to quantity) by the volatile ☉; but if a man would separate it thence by the help of fusion and the addition of ♄, it requires too much costs, and therefore men never attempted any other way of extracting it.

All *Germany* affords this sort of Iron (that is thus endued with Gold) in a most plentiful manner, & I could shew very many places in which it may be found, if some pregnant (or notable) causes did not prohibit me from so doing.

But that all men may know, that I tell the very truth, and do not like a vain man tell you of great Treasures, and that they are every where to be found in *Germany*, and yet notwithstanding by reason of their not being known are not of any use; I will show some of them with my very Fingers as it were, which haply in respect of other some that I know not of as yet, will be but a very few, and these very vile or poor, too.

First of all then, all the Iron that is in the Pine-bearing Mountain and about it, doth contain both fixt and volatile ☉; and this I have often experienced some years since, when I lived at *Kitzing* in *Franconia*, and extracted thence from by the help of a melting Fire excellent ☉: For as then, the manner of extracting ☉ from thence by waters only, without any melting fire, was to me unknown: For at that time those most eminent Men Mr. *Christopher Herbst*, the chief Physician of the Prince of *Arsparch*, and Mr. *Adam Renningen* the said Prince's Lieutenant, and chief of his House, (or Governour) in the Castle of *Blassenburg* near *Culmbach*, presented me various kinds of minerals, to try what was in them contained: And amongst these Iron ones I find all of them to be endued with Gold, which might be exceeding profitably extracted thence by the afore-discloséd moist way. There were likewise given me such like conditioned stones and metals (or ores) which were found near *Bamberg*, of which we have said somewhat afore. The truth of this thing is the more confirmed by the Lord *Fleishman*, Governour of the Province of *Bamberg* my singular Friend, who wrote unto me some few months since, that an excellent Gold-mine is found in the Province of *Bamberg*, but yet that the Gold thereof cannot at all be separated from the Iron by the force of Fire; which volatility of *Sol* I signified to him in my answer might most easily be amended.

Now like as all the Minerals and the Iron it self which are found near the Pine-bearing Mountain, are very much endued with Gold, so those which are found in *Misnia*, *Saxony*, *Thuringia*, and *Bohemia*, do abound with ☽: both of which may be extracted thence by the way by me delivered, with very great profit. I know by good experience that in the *Hungarian* ☉ and ☽ Mine-pits much volatile Gold and Silver is forced away into the Air through meer ignorance.

Certain I am, that the Metals (or Ores) throughout all *Carinthia* and *Styria* do possess much volatile and fixt Gold; especially the Iron Metal (or Ore): For I have many a time made experiments of that thing.

Moreover, the *Hircinian* Wood, *Brunswick*, and *Hassia* yield such kind of Minerals. Nor is *Suevia* destitute of such Iron as is impregnate with ☉; and amongst other things I think good to declare, that some few months since, a certain *Basilian* Ruler sent me a potion

of such kind of Iron; withal relating, that the lesser experiment did there yield ten Crowns of Gold, and that an hundred weight was of this Iron sold for nine *Florins* price. Which Iron when I had tried by the help of a fusing or melting Fire I got a sufficiently great quantity of ☉, but in proceeding by my moist way, I got twice or thrice as much.

Such kinds of stones as these are found in plenty throughout all *Germany*, to which may be reckoned the red and black Talk, the Irony Talk, black and red *Granates*, *Smiris*, *Hæmatites*, and the like, which always are endued with ☉, if not with fixt, yet with volatile Gold. So that now it is manifestly apparent, that in those places where ☉ is digged, all the stones are repleat with volatile Gold at least, if not with fixt ☉ too: like as all the Iron that is digged in *Spain* doth of a certainty besides volatile Gold contain also corporeal Gold. Nay more, there are not only found such stones that have Gold in them in those hotter places, but also in most cold places too, witness *Norway*; where you may meet with whole Mountains consisting of Iron, Talk, and Granates; out of which there has not hitherto been any ☉ gotten by the help of a melting fire with any profit; though I my self have found ☉, in the lesser experiments.

Last year Mr. *J. W.* brought me various Ores out of the County of *Eysfeldein*, that I might try what they contained. Amongst others, there were some little grains of Iron round like a Pease, though somewhat lesser, thus generated in the Earth naturally: This Earth as I was informed, is altogether black, one handful of which contains 10, 15, 20 Grains: wherefore it is not improbable that all the Earth of that place is repleat with Iron; these little Grains are so very tractable, as that they may be made into Plates with an Hammer, and contain much Gold.

Such a kind as this of black Iron grains (yet not so round or tractable as those but now spoken of) were brought me from *Saxony*, which are endued with plenty of Gold, but volatile; they are easily pulverisable, and (as was related to me) are to be found near the Mountain which the *Germans* call *Geyersberg*, where also is gathered a Tin stone, which doth also contain Gold, such as *Misnia* yields more plentifully. Out of 100 weight of this Tin, I found that 10 or 12 Crowns of Gold might indeed be extracted; but this work requires such costs as far exceed the price of that which is extracted: and therefore they sell off the Tin, just as 'tis digged out, to avoid the expence of extracting the ☉.

That which is gathered in the said Mountain, I have often tried, nor did I ever find it destitute of ☉, the which may be very well extracted by my moist separation.

The *Stabelein* Abbot presented me with such like Iron stones and several others that had Gold in them, together with diverse Minerals, some 18 months ago, some of which were gathered in *Westphalia*, some in the Province *Luttinge*, in that part that is under the Government of the Elector of *Cologne*, *P. M.* The Prince himself having a mind to see by what means I would extract the volatile Gold out of them, came unto me, but he died in his Journy homewards; since that I have not received any more of such like aureous Metals (or Ores.)

Amongst other (Ores) I knew an Iron Metal (or Ore) found in *Westphalia*, the half whereof was very aureous, but of no use, because the Metal-men were ignorant of the way of separating those Metals from one another; whereas notwithstanding both the pure Copper, and the ☉ it self may be most easily separated from the Iron according to the way by me delivered.

There were also a while ago several Iron stones brought me by the *Cologne* Merchants, and especially Mr. *Peter Sevet* (*P. M.*) which are found in plenty in the Mountains, and do abound with much ☉: Besides this too, all the Mountains of *Germany*, do yield a yellow Earth, endued with Iron and ☽: of which kind a certain Physician of *Erfurt* sent me some, which (as he related to me) at *Eysfeldt* near *Erfurt* towards the Province of *Moguntia* is plenty thereof.

Such an Earth containing silver, I my self found here in the bordering places 'twixt *Arnheim* and *Embrick*, but not of such worth as that of *Eysfeldt* is.

Who knows but that that same place which we call *Velaw* hides in it vast Treasures. For I have found near *Arnheim* a white Clay and Earth out of which I extracted some ☽: Yea and I found there too, true Veins of Iron, which whether or no they contain ☉ and ☽ I cannot tell: For I never proved them, but the first opportunity I have I intend (God willing) to make an Essay.

Thus 'tis evident that there is not at all wanting unto us the matter of effecting some good and profitable thing by, but the love of idleness is the reason why we neglect abundance of sufficiently obvious Treasures.

The Earth nourisheth men of diverse natures; for some of them are altogether slothful, sluggish, and extraordinarily backward to labour, and yet nevertheless get fat bodies enough: On the other hand, there are some who are very diligent, & do too much consume themselves, and concerning whom (being like unto a burning Candle) they may say thus of themselves, *by serving others, am I consumed.* And as much benefit as the Candle gets by affording a light unto others and by consuming it self; so much doth there redound, especially from ungrateful men, to a diligent man who by serving others wasts and consumes himself.

These and such like most abject Subjects are plentifully enough to be found in all parts of the World where Mountains are, and out of them may you extract ☽ and ☉ by the help of my nitrous Water, were but the way of doing it known, which way hath been hitherto reserved amongst *Arcana* by reason of mens extream ingratitude. And I pray is it not altogether useful and expedient that we should gather such Treasures, and make use of them to Gods Honour, and to the defence of Kingdoms and Mankind? Is there not sufficient store of idle fellows, whom it would be very expedient either to invite to labour or (if they shun work) to banish them the Kingdom?

I believe that this blindness will hardly leave men afore they are reduced to straits, but beware least you hap to begin to grow wise too late.

This work, like as is every other perfection of Metals is done by Sympathy and Antipathy: For that dissolvent which drives off ☉ and ☽ from it self, by Antipathy, all this doth a mercurial *Magnet* greedily attract by Sympathy, seeing it it thus, that *viz.* as like loves like, and draws it to it self; so one contrary hates another contrary, and drives it away.

Two contraries do always produce a third thing. Where the Agent acts upon the patient, and that this patient is even enforced to suffer against its will, and cannot by any means shun the force of the Agent, there must of necessity arise some better product from them.

When water is added to water, neither of them suffer, because they are both of them of the same nature: But when fire and water are joined together, the weaker is the sufferer, and from them doth a third thing proceed.

The stinking and volatile *Sulphur* is the enemy of ☉, and common Salt, of ☽; and by how much these have more stench the one, and sharpness the other, so much the greater is the hostility they shew. The greatest matters are performed by love and hatred; such things as are friendly beget a chearfulness, joy, and vivacity: Whereas, on the other hand, the things that we abhor beget a teadious wearisomeness, grief and death: therefore the more acceptable a thing is, the more it brings of life; the less acceptable the more of dolour doth it bring. All the perfection therefore of the baser metals consisteth only in Antipathy and Sympathy: And if once we do but rightly know the nature of metals, all things are easily accomplished.

It

It is storied of a certain Philosopher in *Italy*, That he had committed some evil deed, for the which he was accused, apprehended, and cast into prison, being here shut up, he could not be brought, neither by entreaties, nor by threats; no, nor by any means to confess his fact; but at last they put into his company a man of no sobriety or modesty at all, who did so grievously exasperate him with his words, that the said Philosopher could not brook it, and so rather chose death; for he affirmed, that the mind of man was far more noble, than to be plagued by such a tagrag, with reproachful contumelies.

Even just so is it with Metals, by how much the nobler and puter they are, so much the less will they commix themselves with impure things.

Gold the purest of the Metals cannot be knit with stinking impure and common *Sulphur*; for there is an antipathy betwixt them. Salt alone is endued with those virtues as to be able to reduce contrary natures into agreement, and to commix them; and being commixt, the fixt ☉ is able to make the unfixt *Sulphur*, like unto it self in respect of fixity, whereas otherwise they always persecute each other with hatred. *Sol* cannot suffer any thing until it has gotten the nature of a Salt, and then may it be tormented (as it were) by the impure *Sulphur*, and be changed into better.

When the Soul of the imperfect Metals (which is a spiritual ☉) is to be forcibly pluckt, and severed from its body, it cannot possibly be done without the dolour or pain of the Patient; for where the pure and spirituous goldenish substance that dwelleth in the corruptible bodies, is to be made Corporeal, and consequently assume a more noble form, the first form must necessarily be annihilated, that so the hidden tender body may come forth to light and be seen.

And this verily is done by another kind of way than the common and already known; by which (said common way) the Metals are separated by *Aqua-fortis* from one another, and are afterwards Molten. For if any one should make one Metalline Mass of ♂, ♀, ♃, ☉, and ☽, by melting, and then would again separate them, by the help of common *Aqua-fortis*, he would effect nothing; for the *Aqua-fortis* would dissolve only ☽ and ♀ and part of ♃ and ♂, and leave the remainder with the ☉ undissolved; or if he should pour on *Aqua-regia*, there would be only ☉ and ♀, together with some part of ♃ and ♂ dissolved, and that which remains of the ♃ and ♂ (undissolved) would be left behind with the ☽, and so there would not be made any good separation.

But if so be that any one has a mind to attempt this thing on this wise, and should say, I will dissolve ♂, ♀, or ♃, by the help of *Aqua-fortis*, or as much of it as possibly I can, for so the ☽ that is in the mixture must needs be dissolved. Now then when 'ts dissolved I will precipitate it (*viz.* the ☽ out of the solution, by salt water (if it be so yet); the ☉ therefore remains, which could not be dissolved by the *Aqua-fortis*; or, if I should dissolve the Metal (or mixture) by *Aquaregia*, then the ☉ is dissolved, (but not the ☽), and so I can precipitate the ☉ out of the solution, by a Lixivium, and edulcorate it, and melt it, and so by this means may I get it. Well (let me tell you) that neither will this way fadge, for these Metals, and especially ♂ and ♃ are too terrestrial, and admit not of such a separation, though there should be in the aforesaid Metals, abundance of Corporeal ☉ and ☽, whereas notwithstanding the greatest part is fluxile, and must be again made fixt and corporeal by solution; for in this work the already pure and fixt ☉ and ☽ may be altered, so as that a Mercurial magnet cannot be able to assume them. As for example, Take you a Metal, as ♂, ♃, or ♀, in which (as is well known) there is Corporeal ☉. Dissolve this in *Aqua-regia*, and precipitate the ☉ by a Lixivium of fixt Salt; boil this precipitate with ☿, and see if that precipitated ☉ will pass into the ☿; you'll find not, for this ☉ hath gotten a Crust (as it were) in its precipitation by the Lixivium; that is, it is environed with a saline Terrestreity, in so much that the ☿ cannot attract the ☉.

Neither likewise can ☿ attract or assume such a silvery Calx as is precipitated out of the solution with salt water, and that by reason of the terrestreity alone, which adheres thereunto by means of the precipitation, by which it is altered and deprived of a pure Metallick form.

The truth hereof may you easily experiment, on this wise. Dissolve a particle of pure ☽ in *Aqua-fortis*, and dissolve the same quantity of pure ☉ in *Aqua-regia*, precipitate the ☽ with salt water, and the ☉ with a Lixivium, so as that the ☽ be precipitated into a white, and the ☉ into a yellow Calx; edulcorate both Calxes apart after the best way that possibly you can, with hot water many times, so long till the edulcorating water be wholly sweet, then weigh these dryed Calxes, and you shall see that the ☽ and ☉ you took, are one fourth part heavier than before the solution of them; and this is to be ascribed to the Salts only, that have adjoined themselves to the Metal in the precipitation, and cannot be thence seperated by edulcoration; and therefore such a silvery Calx yields not (when molten) a pure Lunar body, but a certain Ashy coloured Mass, fluxile and volatile, by reason of the Salts; and this Calx is not changed (or swallowed up) into the ☿ neither before nor after its being molten, nor (after its melting) can it ever be dissolved by *Aqua-fortis* or *Aqua-regia*, which alteration proceeds meerly from the Salts that have adjoined themselves thereto in the precipitation.

Even just so is it with such a golden Calx, which being separated by precipitation out of the *Aqua-regia* with a Lixivium, will not have ingress into ☿, by reason of the impurities that accompany it; and therefore this golden Calx (when it is made hot) kindles, and vehemently operateth upon it self, and this is meerly from the Salts.

From hence it is clearly evident that the Calx of ☽ precipitated by Salt, and the Calx of ☉ by a Lixivium, have not any communion with ☿, how then can such a Calx, which is (now) at first forced out from many terrestrial parts, and imperfect Metals, and separated from them, have a greater communion therewithal, have ingress thereinto, and conjoin it self therewith by digesting. Other wayes therefore must be taken, by which you may extract the volatile and fixt Gold, that lies hidden in ♂, ♃, ♄, or ♀: Now many there be who do in vain search into those things which they know not the nature of, and so walk in darkness like one that hath already fallen into a Pit.

But if you come to know such a menstruum or dissolvent, which is an enemy to ☉ or ☽, and yet nevertheless doth plainly dissolve ♂, ♃, ♀, and ♄, then the spiritual ☉ that lies hidden, will manifestly appear corporeally and visibly, and will pass into the *Mercurial* Magnet.

Besides, this dissolvent must likewise be of such a nature, as that (when in the solution or digestion of the imperfect metals, it makes the spiritual and volatile Gold corporeal, and casts it off from it (as I may say) by antipathy in the form of a powder) this powder may not be environed with any crustiness as abovesaid, but that both the Calx of ☽ and of ☉ may have their natural metallick splendor, whereto the ☿ may adhere, and may attract unto it self whatsoever the dissolvent separates by the continual digestion.

Farther, this Dissolvent must be of such a nature as not to be so sharp as to dissove the ☿ for then the work would not succeed; indeed it is scarcely necessary to make use of the ☿, to receive into it the spiritual and fixt Gold which is separated in the digestion fixation and separation of the Volatile ☉ of the Metals; for when it is once evacuated it will never again occupy (or seize upon) its impure body; yet notwithstanding this chiefly is done for this reason, *viz.* that the spiritual ☉ & ☽ in the imperfect metals may be the more willingly made Corporeal, when it finds a fitting subject wherein it may lie hidden and rest. Besides too, this spirituall ☉ and ☽ of the Metals, is indued with such virtues, as that it tingeth some part of the ☿ into ☉ and ☽, when it hath thereinto entred, whereby it yields the more profit.

Thus much likewise are ye to know, that this labour does not only proceed in the moist way, but also in the dry; but yet far easier in the moist than in the dry way; yet in the (dry way) a greater profit is gotten in a shorter time. For like as to one measure of Milk are required 1, 2, 3 or 4 spoonfuls of Salt, that so the Cheese (or Curd) may be separated from the water (or whey), but there needs not the quantity of one spoonful of the Spirit, which is much stronger than the bare Salt: Even so stands the case with Metalline operations; for by how much the greater and more powerful the Agent or Contrary is, so much the sooner and stronger doth it perfect its operations. Hence it is, that where the Agent must be yet more strongly active (as in the dry way, it must of necessity be where the strong fire adds virtue and vigour to the Agent) it being consequently more contrary (or powerful) the separation is sooner perfected. For example, Let us see how it is with Milk, where 10 or 20 drops of Spirit of Salt separate some cold Milk, there will need but half the quantity only when the Milk is boil'd or otherwise heated; even so is it with our Agent, whereby we make the Volatile Gold in the more vile or meaner Metals, corporeal and visible; it operates far more strongly in the dry way, than in the moist way; for in the dry way, the external fire aideth our fire, and hereupon finisheth its operation so much the sooner; but in the dry way must another Magnet be made use of.

Thus much let suffice touching the particular washing or external purgation of the viler Metals; as concerning the internal, central, universal washing, by which the interiour Soul of ☉ and ☽ is extracted for the Tincture, I do not as yet (certain) know any thing thereof, nor desire I to know such abstruse and hidden things: content I am with such things as God of his meer grace hath bestowed upon unworthy me, and if God shall so please, so far to profit mankind either by mine or any others help, he will also present an occasion of laying hold thereon (*viz.* on the Tincture) for all good things come from God.

Now in this action (or operation) is required an oculat inspection, such great things cannot be understood by Books or Writings, and he that desires to excel in these (operations) let him take it in good part, that (I say) he ought frequently to here me as a master, and to see me labouring about these things, which otherwise he will never learn, for the common Alchymists are plainly ignorant of this work; yea the Ancient Philosophers did hide it as a secret, the most they could, that so it might not be trodden under foot by Swine.

But whereas I do so clearly set down these things, otherwise than ever any before hath done, the consideration of the time

(or

(or age) requires it, and beſt of all known it is to God, why he now delivers theſe things to be divulged. Forasmuch as mention hath been made in the aforegoing treatiſe of Spiritual ☉, which might be extracted, together with the corporeal, and ſome or other would perhaps very willingly know what is to be underſtood by the name of ſpiritual ☉; I think it not much amiſs a little more largely to explain theſe things for the ſake of the Ignorant.

Every Spiritual thing is inviſible, and void of a palpable body; but now if a body be given thereunto, in which that ſpirit may be made corporeal and viſible, then the ſpirit is not any more a ſpirit, but is changed into a body; if therefore the Spirits are good, they do likewiſe make good Bodies, and ſo on the contrary. For all the Philoſophers tell us, that the Spirit or Soul in Iron and Copper is more noble than in ☉ it ſelf, becauſe the body which it dwells in is groſs, terreſtrial, and impure.

The caſe then ſtanding thus, it is no wonder that if theſe ſpirits are ſeparated by art and force, and expelled from ſuch groſe bodies, and joined to other purer ſubjects, they then produce ſome good thing. Would not the other Beaſts reverence the Aſs clad in a Lions skin, as if he were their King, and this mearly by reaſon of his skin; though inwardly he were an Aſs? If ſo be any man be but cloathed in ſilken rayment, and go gawdily; do not every body put off their hats to him, and honour him, though inwardly he haply is a thief or a knave; and ſo on the contrary, if a moſt honeſt and moſt learned man go in tattered apparel, or at leaſt in mean rayment, is he not rejected, and deſpiſed by all. From hence it ſufficiently appears how ſiniſterly the common people judge of all things, and neglect the inſide, and only look to the outſide ſhew. 'Tis the external Shape, according as 'tis good or bad, that makes a man eſteemed by the vulgar either good or bad, comtemptible or honorable, though his nature (or education) poſſeſſeth other properties.

The like is to be underſtood, concerning the contemptible Metals, *Mars* and *Venus*, which according to the report of all the Philoſophers have more Tincture in them than *Sol* it ſelf hath; but yet by reaſon of the groſſneſs of their bodies are they rejected: now therefore, by how much better the means or way is by which this noble Spirit is extracted, and added to the pure bodies, ſo much the better is the product.

When therefore the groſs bodies of ♂ and ♀ are artificially broken, and the ſpirit diſſolved, and thence forced out, it ſeeks it ſelf another body wherein it may dwell and be at reſt. Therefore when we do by art diſturb (as I may ſay) the groſs bodies of *Mars*, *Venus*, *Jupiter*, or *Saturn*, and diſſolve the pure Soul, and expel it by antipathy, out of its impure houſes, and contemptible garments, and ſet before it a pure ☿, it poſſeſſeth it, and ſo aſſumeth another nobler body than it had before, and which then is ☉ and ☽, according as 'tis managed. This is my opinion, and after the ſame manner is the thing to be underſtood concerning Spiritual Gold.

But what buſineſs have we here with the Spiritual ☉ of Metals? Let us be content with the Corporeal, and leave the Spiritual to the Philoſophers, to make the Tincture with. But forasmuch as upon the occaſion of my teaching the means of extracting Corporeal ☉, I could not leave the ſpeaking of the Spiritual wholly untoucht, I made alſo ſome kind of mention of the ſame; and it will be beneficial to ſome or other, who till they do underſtand my meaning, may be content with the Corporeal ☉. But ſuch as have open and attentive Ears to conſider what my drift is in this diſcourſe, my doctrine will be more profitable unto them, than either *Sol* or *Luna*.

There is yet one thing more to be added. In ſome places they are wont to reduce the *Sol* and *Luna* into a powder with ☿, that ſo the Corporeal ☉ and ☽ may be ſeparated and extracted from the Stone (or Ore); and this is no new or unheard of thing.

But this is more rare (or ſeldomer uſed): a Metal which hath not as yet arrived to his due maturity but is as yet conjoined with his firſtens, and conſequently it flies away in the melting, and neither yields ☉ nor ☽, when it (*viz.* ſuch a Metal) is commixt with ☿ ſalt and vinegar, and let lie to act upon each other for ſome days, it comes to paſs that the Mercury attracts the immature, Spiritual ☉ and ☽, and makes it corporeal and fixt, ſo as it may thenceforward be molten. If then the Spiritual ☉ and ☽ doth ſo eaſily enter into the ☿, and make it Corporeal, it is yet much more facile to be done by my way, which is effected by the help of more ſtrong (or powerful) inſtruments, than by bare ☿ only, and Salt and vinegar, with which they mix the Metal with the ☿, nor can they poſſibly do ſo much as my ſecret menſtruum which penetrateth all things.

When now the Matter, together with the Salt and Vinegar is duly ſeparated from the ☿ by the help of fair water, they paſs the Mercury through a skin of Leather, which is again ſerviceable for the ſame uſes; but that of it which adheres to the ☽, is thence ſeparated in an Iron Retort, then is tried the weight of that which is ſeparated, and as much as there wanteth of the weight of the ☿, ſo much of ☽ do they receive in its ſtead, which is a thing well worthy thenoting, and deſerves a farther inquiry, and is not here ſet down in vain.

Let not any one deſpiſe theſe few things which I heve here adjoined, for they compriſe in them moſt great myſteries; yea and greater than moſt will believe.

Neither let any one imagine that I will preſently communicate this moſt noble Secret (which clearly ſhines in the dark) to every ſtranger; no, no ſuch matter; I will (God permitting) ſhew theſe things to my honeſt friends, that ſo it may not periſh together with me; but however I will well think on that much uſed Proverb, *Fide, ſed cui vide*; Truſt, but ſee whom you truſt.

The *Farnnerianiſts* have given me this document; many there have been who have come unto me and declared the miſerable ſtate they were in, that what by the Wars, and by other misfortunes, they have loſt their Goods, and have begged me for the love of God, to ſuccour them, by communicating to them ſome operation, whereby they might ſuſtain their lives, promiſing that they would requite this kindneſs by their earneſt prayers unto God in my behalf.

Theſe and ſuch like words have ſometimes moved me that I have given ſome ſecret to one or other, and have beſtowed on them an overplus too; yet I obliged ſome of them, that they ſhould convert it ſolely to their own uſe, and not communicate it to others without my privity, which thing they promiſed largely enough. But as ſoon as they have been gone from me, they have preſently ſold thoſe ſecrets of mine to others, and which is more, to my Enemies. Now when by reaſon of their ignorance, they did not know how to inſtitute the operation aright, they falſely affirmed, that they bought this Art of me at a price, and that they have been cheated; whereas they well know, that it was pure affection induced me to beſtow theſe things upon them without any reward.

Theſe and ſuch other like ἀνλίδωρα (or Gift-hinderers) have deterred me from communicating any thing to others for the future; and this I would have every one to conſider, and not trouble me with either Letters or Viſits.

Yet nevertheleſs I will communicate ſtore of my ſecrets unto my Friends, that ſo they may not clearly periſh with me, nor be thrown to my Enemies, and ſwiniſh men.

I have done as much as in me lay, nor will I omit to do more where I ſhall ſee a grateful mind; in the next place I will (for the ſervice of my Friends) treat about and ſhew in the fourth part of the *Proſperity of* Germany, the Secrets of *Saturn*, by what means any one that is but a little verſed in managing the fire, may ſeek (or make) ſome Country fellows, his tributaries, who may pay him an appointed tribute every week, after the Example of Kings and Princes, who beſtow upon their faithful ſervants (that deſerve well of the Country by their valour againſt the Enemies) Kingly gifts as whole Cityes, Towns, Villages, and manySubjects as an inheritance, of whom they may afterwads receive Tribute and live very abundantly or plentifully.

Now by how much the more Country-men there are that be Subject to a noble man, ſo much the richer is he ſuppoſed to be, for they pay the more tribute. And the more Ploughs the Countryman hath a going, the greater is the tribute he pays his Lord, which thing the governance of States or Common-weals induceth, as being a juſt thing.

Now after the ſame manner as theſe things are in uſe in political governments, are they alſo in Alchimy, for it doth likewiſe when we have for ſome time faithfully ſerved under her, beſtow on us tributary Country men (as 'twere) by way of recompence, from whence we may have Food and Rayment.

The more Fields and Ploughs that we give to theſe country-folks, the more Tribute do they pay. Neither do theſe forſake their Maſters, for they are ſhut up in a ſtall, and when their bellies are filled with Coals, and that they are ſafe from the Rain (or Weather) they are contented, and do perform the buſineſſes that are impoſed upon them.

By how many more the Ploughs are which we give unto them (though one Country-man can hardly manage above two or three, ſo much the more do they give.

Such Country-men as theſe doth the true Alchimy diſtribute amongſt her Servants, whereby they may thenceforward lead a quiet Life.

If God ſhall vouchſafe me life and leiſure yet a while longer, I have purpoſed with my ſelf to bring moſt mighty benefits unto my Country.

In the mean while, let theſe things be accepted in good part, Thoſe ſame tributary Country-men may be ſhewn my Friends, together with ſundry other profitable Inventions, in my laboratory.

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OF THE

Prosperity of GERMANY.

In which are revealed many excellent, usefull Secrets, and such as are serviceable to the Country: and withall, several Preparations of efficacious Cates extracted out of the Metals, and appointed to Physical uses; as also various Confections of Golden Potions. To which is also adjoyned a small Treatise, which maketh mention of my Laboratory; in the which there shall be taught and demonstrated (for the publick good and benefit of Mankind) wonderfull Secrets, and unto every body most profitable, but hitherto unknown.

The PREFACE to the Friendly READER.

ALthough I promised, above a year ago, in the Preface to that Book which I published of the Nature of Salts, *that (besides Salt) I would likewise adjoyn some Broth and sugared Sawces and Seasonings to the other Meats disht out upon the Table: yet notwithstanding such as are searchers after good Arts, would not in any case allow me so much time as to prepare those Sawces; and being prepared, to dish them forth upon the Table: but earnestly requested this boon onely,* viz. *that I would not forget to furnish the said Table with Cheese and Butter. The satisfying of whose request, I confess my self very ready to yield unto, nor doe I find any other obstacle, save onely the scautness of time, which I am constrained to imploy about other affairs more necessary.*

But however, seeing it is esteemed a very praise-worthy action in a Man, by diffusing his kindnesses in many places to benefit many, I have deemed it a thing well worth while, to adjoyn (setting aside other things) unto the afore-disht-out Meats those promised Sawces, with Butter and Cheese, in to boot; but yet, with as much brevity as conveniently may be.

Had a longer space of time been permitted me, I would have clarified the Sugar better, and made the Sawces more savory, which the hasty posting away of time hath hindered the performance of.

Besides, forasmuch as I have promised a Fourth Part of the Prosperity of Germany, *together with a discloſing of excellent metallick Medicines, it hath seemed good unto me (for the fulfilling of my promise) to publish these my most efficacious Sawces under the Title of the Fourth Part of* the Prosperity of Germany; *and the rather, because I have not time sufficient for the description and detection of other Secrets.*

Now by how much the viler and more contemptible cloathing these present Arcana's do come abroad in, so much the greater and more noble virtues do they hide under their sordid or despicable rayment. I was of the mind, I confess, to have kept yet longer by me this Fourth Part, that so (being sent abroad to publick view in a more convenient season, it mought have been more adorned with Secrets of greater moment afore its being exhibited to every ones view. And amongst those Secrets,

one eminent one, is the Concentration of Gold and Silver, and their reduction into such a form and figure, as that it cannot at all be known by our Enemies (who sometimes rush in upon us unlookt for, (which [sore affliction] God (of his mercy) keep us from.) And so by this means may it come to pass, that such kind of Bodies being thus hidden under an unknown Garment, will not be robb'd and taken away.

And whereas I have demonstrated in the foregoing Third Part, by what means great Treasures of Gold and Silver may easily be gotten in all places throughout all Germany, *by the help of my Inventions; I make no question, (nor indeed can it otherwise be) but that such as are diligent House-holders will listen unto my sayings, and put in practise many of those things, especially seeing I will both counsel and assist them, as much as in me lyes.*

If now the searching after so great Treasures be [not] too securely and negligently handled, it will undoubtedly come to pass, that our Country will (by such a notable Medium, and such great Treasure) be rendred even wholly invincible. History maketh mention, that the Ægyptians *(by their skill in the Meliorating of Metals) enjoyed such vast riches, and so great a power, as that they cast from off their necks the Yoak of the* Roman *Monarchy, even untill that time in which their Books comprising the Art were burnt by the Emperour* Diocletian, *whereby they were enforced to be subject to the Empire of* Rome. *For the most noble Art of Printing Books was in those days unknown, and their Sciences were wont to be written in Parchment with great labour and much cost; and undoubtedly they were not throughly stored with such kind of Books, whereby the* Romans *did the easilier get them into their hands and burn them.*

Now when once a Writing is committed to the Press, it may be printed off in an almost-infinite Number, for a Printer will doe more in one day, than a vast multitude of Scribes would be able to write. And being it is so, who could possibly be able to scrape together out of all the places of a whole Country such a multitude of Books, thereby to root them out in these our times, and by burning annihilate them, as the Romans *did.*

This one thing I here say, viz. *Did I but know and find that those things which I have hitherto published, would not onely be acceptable, but be also put in use and practise, it would be as a spur unto me to stir me up to adjoyn to what is already done, more and greater Secrets. Meanwhile let what is at present offered be well accepted, and what is promised, be patiently expected.*

Of the word Sawce, *and what is meant thereby.*

I Have obliged my self by promise, to adjoyn unto those my Meats which I have hitherto disht out upon the Table, some good Sawce and Pickle; which Meats, seeing they appertain not unto the plain common ways, but belong to a very excellent Skill or Science; it is altogether needfull, that the Sawces be correspondent thereunto, and that even they as well as the meats themselves, be by reason of their savourines, gratefull unto the Palate. Now therefore as in the Feasts of great men, the Pickles are not set on the Table afore the Guests have fill'd themselves with Flesh and Fish, and so allayed their hunger, but are set afore them (afterwards) as so many Vehicles to drill down the Wine with the greater delectation, for such Pickles do for the most part communicate a sweeter (or toothsomer) tast to all kind of Fruits, Seeds, and Spices, and Sugar: So likewise must I, in the making and dishing out such Sawces for this Feast of mine, mind onely this business, *viz.* to take care of providing my self of the best Sugar, and choice Spices; and these are extractable onely out of the Metals; *Saturn* affording Sugar, and *Sol* and *Lune* yielding most sweet Spiceines.

But afore I dish out my Pickles, I have thought good to set afore them a sweet Broth or Seasoning, [together] with Butter and Cheese, that haply one or other of my Guests are minded to dip a piece of Roast-meat therein, or else to tast of my Butter and Cheese, whereby they may with the greater delight tast the sweetnes of the following Sawces.

And although I was minded to exhibit in this place some excellent and efficacious Metallick Sawces: yet notwithstanding I could not chuse but first present you with a fore runner as 'twere, signifying unto you, how that by the help of Salt good Broths and Sawces may be made out of the Vegetables, and Sawces, serving for the bettering of Cheese and Butter made out of Animals: that so my Treatise of the Nature of Salts may not be at all defective, and that every one may see what a most noble and most excellent Creature Salt is, which is capable of exalting the Animals, Vegetables and Minerals to a far more worthy degree by so excellent a Melioration of them.

Salt and Vinegar are commonly reputed to be the best Sawce, and 'tis most truly spoken: For amongst all the Sawces and Seasonings put unto Meats, Salt and Vinegar bear the bell; now the Vinegar is for the most part made of Wine, Fruits, Ale, Honey: But as for Salt, if it be turned by distillation and rectification into a sweet and acid Spirit, it becomes a sweet and strong Vinegar, and to be preferred before all others: so that there's no need at all of the Vinegar of Wine, Ale, Honey, and Fruits. We will therefore shew unto such as are desirous of sweet or savoury Sawces and Picklings needfull for Flesh and Fish, and of well tasted Cheese and Butter, the way of preparing the same by the help of Salt; whereby a Man may make himself for his own Kitchin use or Cookery, various Sawces as him listeth. And having shewn this, we will proceed on to the description of metallick Sawces.

He that is desirous of a good Sawce or Pickle fit for Flesh and Fish, will not find any thing that is more fit or proper than a well-prepared and rectifi-

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ed Spirit of Salt, the which he may prepare with whatsoever Herbs and Spices he pleaseth, according as is agreeable to his Palate.

For example, Like as otherwise most acceptable Broaths or Sawces are wont to be made with Wine, Vinegar, Pepper, and other Spices, and are put unto the Boiled or Baked Flesh or Fish in the same Dish, or set by the same in little Sawcers, that so all those Meats may leave the more gratefull taste upon the Palate: Even so may the same be effected with Spirit of Salt, and that far more commodiously, and to better profit than if Wine or Vinegar were made use of to the confection of those well tasted Sawces. But it is my Spirit of Salt I here speak of, (which being prepared according to my prescription, is of a most delicate pleasantness,) and not of that which is most an end sold in the Apothecaries Shops, and in other such like places, and is for the most part ill prepared, and not at all rectified, and consequently by its ungratefull sharp and harsh taste, it provokes to Vomit, if it be taken into the Stomach; 'Tis likewise of a yellowish colour, and with its sharp constriction draws up the Tongue, whereas it should be more clear and transparent than Fountain Water, and by the pleasantness of its acidity excell the Juices of Apples, Grapes, or Limons. And being furnished with such a sweet or pleasant Juice of Salt, I need not any Wine, Vinegar, or other sharp Juices of Grapes, Limons, Rasp Berries, Sorrel, and the like, to give a pleasant and savoury taste unto my Flesh or Fish: for it may be done far better with this good Spirit of Salt, than with Wine or Vinegar: For, that Spirit of Salt serves instead of them all, nor is it at all subject to corrupt as other Juices are, but conserves its sweet and pleasant essence without any decay. But if you would make use thereof singly or alone, then must a little Water or Sugar be mixed therewith, that the acidity or sharpness thereof may be a little allayed, and thus may it serve instead of a Sawce to be added to either baked or boiled Flesh or Fish. But now if a man be minded to add green Herbs for alterations sake of the taste, such as are Parsly, Garden Cresses, Spanish Pepper, and the like; he may beat or shred them small and moisten them with Spirit of Salt allayed with Water, and so put them instead of a cold Sawce to Flesh and Fish. But if now the Sawce is to be poured warm to the Fish and Flesh, then must a little Butter be thereto used, and that on this wise following. Take some pure and clean Water, and make it somewhat sharper (with good Spirit of Salt) then strong Wine, Vinegar, put thereunto some good Salt Butter or Fresh, at your pleasure; and likewise such Spice as (besides Pepper, Ginger, Nutmeg, and such like) you list to add, as also Salt if need be; put it in a little Earthen Glazed Pot, and not in a Copper or Iron Vessel, for they are altogether unfit for this Operation; set the Pot over a few Coals and heat it gently to melt the Butter, then stir it throughly about without ceasing, with a Wooden Spoon, and then being molten it assumes to it self the saline Vinegar, and the Sawce becomes thickish, the which must be then poured out to the boild and seasoned Flesh or Fish. But if green Herbs, as Chervil, Parsly, Cresses, *Piperitis* or Spanish Pepper, and such like are to be adjoyned thereunto, you may bruise or chop them small, and then put them into the Pot unto your hot Broath or Sawce, and mix them well together, and then presently pour out your Sawce to the Flesh or Fish, for by this means the Herbs retain their taste and greenness, and so delight the Eyes with their lovely aspect, and please the Palate with their pleasant taste, which would not be if they boiled much with the Liquour, for then they would lose both their subtile taste and green colour. Moreover, you are warily to observe in this thing, that this Broath or Sawce be not let lie upon the Coals too long, and so the *Acetum* separate it self again from the Butter; which to prevent, there may be mixt with the Sawce one, two, or three yelks of Eggs, which being well stirred with the same makes it the thicker, and better to stick on to the sopping when you take it out of the Dish where the Flesh or Fish is.

Such Sawces do give the Fish either boiled or fried, a most acceptable taste, and probably if some Sugar be thereto added it would do very well for Flesh too. But yet, sharp Juices or Broaths are better and more agreeable for Fish. Now after this manner may every one make his own Sawce as he listeth, and render the same with some Herbs and Spices, the more savoury unto his Palate; and consequently needs not either Wine or Vinegar, nor any other acid things.

If any one has but any pure and clean Spirit of Salt at hand, he may (by the addition of certain Herbs and Spices) prepare his Sawce as best likes him, and make it far more pleasant and delightsome than if it were made with Wine, Vinegar, or Ale-Vinegar, nor can you get these every where neither. But the Spirit of Salt may be prepared and so had every where, and therefore on that account too is it deservedly to be preferred before all other seasonings.

Now in the Winter Season, when green Herbs are not to be gotten, the pounded Roots of Spanish Pepper may serve, or Mustard Powder reduced with Sugar and Spirit of Salt into hot and cold Sawces. Nor would I have any one to be so bold [and foolish] as to contemn these my Sawces afore he hath tasted of the same; for I doubt not but that if he once comes to taste the delightsome pleasantness of the same, he will prefer them afore all other, and will give the Vinegar of Salt its due honour.

And now to give an experiment, taken out of the Treasury of Salt, unto those that are delighted with the taste of good Butter and Cheese; let them listen unto those things which here follow. If thou art desirous to prepare a durable Cheese of Cows Milk, and such Cheese as hath all the tokens of a good Cheese, *viz.* such as is weighty, compact, close without Eyes, and putrifying Holes, void of sliminess and bad smell, thou may'st be a Master of thy desire by observing the following Operation.

Take of Cows Milk, Sheeps or Goats Milk, or of either of these which thou hast at hand, as much as thou pleasest, or as much as is sufficient, (but amongst these Milks, Goats Milk is the best, Sheeps next, and Cow Milk inferiour to the other two both in goodness and excellency:) Heat it at the Fire, and pour it out into a wooden Vessel. (*N. B.* Iron and Copper Vessels are not to be used in this way) and reduce the Milk into a Curd by the pouring on of Spirit of Salt. Now one Spoonfull of this Spirit is enough to curdle ten measures of Milk. This done, and the Milk and Spirit of Salt having been well stirred about with a wooden Ladle and curdled, put the same into Hair Strainers or in very clean Linnen ones, that so the Whey may drain out and be separated, then gather up the ends of your Strainer,

ner, and lay thereon heavy weights and ſqueeze out all the wheyiſh moiſture. Then take your Cheeſe out of theſe Strainers, and put it into wooden Veſſels, and there break it into ſmall bits or pieces; which being thus broken, ſprinkle ſome Salt, and ſome of your pure Spirit of Salt too thereupon, and mix all well together with a wooden Ladle or with your hands well cleanſed: Being thus mixed, fill your Veſſels or Cheeſe Fats [which let be] greater and leſſer [as need is,] and ſqueeze and compreſs the matter well in, as they are wont to do in making of Cheeſes. Then expoſe them to the warm Air, and dry them, and it will give you compact and durable Cheeſes, not unlike to thoſe they call Parmeſant, and ſuch as will be void of Eyes, and of fœtid and putrid Holes, Slimyneſs, and ſuch like defects uſually incident to the common Cheeſes, nay they never are obnoxious to thoſe faults.

The reaſon is, becauſe the firſt Coagulation or Congelation of the Milk is made by the help of pure Spirit of Salt, which defends from all putrefaction, and not by the help of the fœtid putrid Rennet, from which nothing can proceed but Rottenneſs and Worms.

Then farther, the Spirit of Salt being together with [Crude] Salt ſprinkled thereupon (after the ſqueezing out of the Whey) doth in an eſpecial manner reſiſt all that putrefaction that is wont to be in Cheeſes, and condenſeth the Cheeſes, and impedes any fermentation, which dilateth the ſaid Cheeſes and makes them ſpongious and porous; and by thus condenſing them, it makes them remain ſafe and free from all putrefaction.

Such Cheeſe therefore as is brought to this perfection, doth well deſerve the preheminence above the reſt, and is extolled by the praiſe of thoſe Ancient Verſes, *viz.*

(*dalen*,
Good Cheeſe muſt neither *Argus* be, *Largus* nor *Mag-Methuſelah*, nor *Habbacuck*, nor *Lazarus*, [Amen.]

That is, it muſt not be eyed like *Argus*, nor tough like *Largus*, nor hairy and crying like *Magdalen*, nor hoary like *Methuſalem*, nor light like *Habbacuck*, nor full of ſtinking holes and rotten ſores like *Lazarus*: which defects if Cheeſe wanteth, it well merits the title of goodneſs: and ſuch are thoſe Cheeſes which are made by the help of the Spirit of Salt; do but make ſuch a Cheeſe and try whether or no it will not be of a more pleaſing reliſh than all others are.

Such Cheeſes are never corrupted, they never become tenacious, limber, full of holes, and worms. The Spirit of Salt being poured into the holes of Sheep Milk Cheeſe, or Cow Milk Cheeſe, doth either kill all the Worms or cauſe them to get packing, it contracteth the holes, and turns the bad Cheeſes into good ones, and this my ſelf have tried.

Thus friendly Reader, haſt thou learned how to make a fit Sawce for Fiſh and Fleſh, and likewiſe good and durable Cheeſe; it now remains that we teach thee how alſo to make good Butter.

If you are deſirous of making good Butter by the help of Spirit of Salt, and ſuch as is dainty, pure and yellow, and of a moſt delicate taſt, and ſuch as will not eaſily contract a ranck taſt, you may obtain your deſire by proceeding on this wiſe. Take off the Cream from good Cow Milk, and make it into Butter, afore it be any thing mouldy, or of an unpleaſant taſt, and ſeparate the Butter-milk according to the uſual cuſtom, then put the Butter in a wooden Veſſel, and waſh it ſo long in pure cold Salt Water, untill there be no more Wheyiſhneſs left, and that the Salt Water do come off thencefrom, as clear as it was at firſt putting on, and that the Butter appears ſufficiently clean, which waſh it once agen, on this wiſe following. Diſſolve in pure and rectified Spirit of Salt, as much Salt as it will diſſolve in the cold: And herewithall waſh your Butter anew, yet ſeveral times, and work it well with that Spirit, and by thus proceeding will it abſume the reſidue of the Wheyiſhneſs which is the cauſe and riſe of rankneſs, and which common Salt Water could not remove. This done, the Butter is to be ſeaſoned with common Salt according to the uſual manner, and thus will it abide perfectly good for a long time. But now the big Sea Salt is accounted the fitteſt for this purpoſe, which being a little heated red hot in the Fire, comes to be of a very delicate whiteneſs, and doth the eaſier admit of reduction into fine Powder, and is better than that which is boiled up in Iron, or Leaden Pans or Cauldrons.

N. B. But he that can get ſuch a pure ſort of Salt of a ſexangular ſhape like a Dye, as is prepared in my Laboratory, he may uſe that, as being by far the purer. As for the Veſſel it ſelf whereinto the Butter, prepared and cleaned after the aforementioned manner, is to be put, it muſt be ordered on this wiſe following. You muſt get you a new Oaken Barrel, and ſo ſteep it in ſtrong Salt Water, not the common [Sea Water,] as that it may well imbibe the Salt into this Veſſel muſt the Butter, waſht as aforeſaid, be preſt and thruſt in ſo tight and cloſe, that there may not be any hole or gaping place left therein; but you muſt leave two Fingers breadth in the Barrel at top of the Butter, which is to be filled up with Spirit of Salt, glutted with good and pure Salt diſſolved therein, that ſo the Butter may be well covered over, and all Air being excluded, it may keep fine and ſavoury a long time. Now when you would Diſh out ſome of this Butter on the Table, you muſt take it out of your Tub with a clean Wooden Spoon, and not an Iron one, and waſh the ſame in pure and clear Water afore you eat it, if you would not have it retain the ſharpneſs of the Spirit of Salt.

Well, here is yet a better way ſtill, *viz.* Take new Butter and let it melt very gently over the Coals, and it will be covered over with much frothy Cheeſyneſs, let that froth be neatly ſcummed off; which being ſo done, it will look in the Pot like to a pure and clear Oil, pour it out very clearly into another Veſſel, that the ſediment at the bottom may abide behind. This Butter when 'tis cold looks juſt like yellow Wax, but yet is it a little ſofter than it ought to be, and therefore it muſt be well wrought its due time with Spirit of Salt impregnated with new Salt, that it may obtain the hardneſs of common Butter, and then be ſalted, and barrel'd up, and kept for uſe, which will be far better than the common Butter. For although this purging it by the Fire takes from it all its Cheeſyneſs, from which it had its hardneſs; yet notwithſtanding the Spirit of Salt gives unto it a far different and much better hardneſs, and cauſeth it to excell all other ſorts in goodneſs and long keeping.

Theſe things was I willing to take out of my Kitchin and ſet afore you, namely Sawce, Cheeſe, and Butter of good and exquiſite taſt, which if they pleaſe not the Palate of ſome or other, I would have him

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even forbear to use them. It is not without some weighty cause that I have done these things, which I well know will undoubtedly undergo the perverse Censures of Spies and Mockers, who probably will say, what Womanish Toys, and Childrens Baubles doth *Glauber* here Tattle about, making himself a Laughing Stock to the Women, and Female Sex, who will say of him, that by his teaching to make Butter and Cheese, he hath thrust his Sickle into the Womens Harvest. VVell, let them prate as pleaseth them, Geese are not wont to utter ought else but a Goose like Gagling. For my part I minded nothing else but to have this Treatise be a meer Woman's Work, and Boys Play, [but yet] it will reveal to the Ignorant more good, than [is attainable] by the perverse instructions of all such Authours whose Writings are Spinn'd out to that height of subtility as to exceed every ones Capacity.

'Tis not every one that will easily apprehend those [Knacks] which I teach and reveal under this Cheese-making Trade, and these Kitchin Operations; nor indeed doth it much matter that they should understand. God will open the Eyes of such as he shall judge worthy of such great gifts, and will conceal and hide the same from the Proud and Wicked Crew.

Having thus finished this Cheese and Butter-making: Let us in Gods Name enter upon another Work of Women, and Boys Play, which Kitchin-like Labour, and Cheese and Butter-making, is meerly metallick and doth far excell in excellency and nobility the hitherto described Operations, although it be performed by the help of the self same Salt. For without Salt no imperfect Metal can be really bettered, the very title of the Art it self witnessing as much, which being stiled Alchymy, signifies no other thing than a melting of Salt: but yet I do not not tell what kind of Salt is here to be understood, [or, that any kind of Salt is here meant] but thus much onely do I averr, that the transmutations of the Inferiour Metals must be effected by Salt.

Now then, forasmuch as this Treatise of mine depends on a former, intituled of the nature of Salts, as being an overplus; so it is likewise altogether necessary, that instead of Fruit and Sugar, I use Salts and Metals about the preparation of these my Sawces.

And whereas the making of the Sawces [or Sweet-meats] with Sugar, doth not onely belong to the meaner Sex, but also to the more noble, and yet nevertheless the Operation it self is nothing else but a meer washing and boiling, and a true Womens Work, we will therefore in our description bring the same upon the Stage under the Title of the Work of Women, and Play of Children.

If we rightly look upon the Work of VVomen, and compare our metallick labour therewithall, there presents it self unto us, a very notable agreeableness betwixt them. The VVomens VVork is to boil and wash, and when they are about to boil, they set their Pots over the Fire, and having washt their Flesh, they strow thereon some Salt and Spices, and boil the same in the said Pots with VVater, VVine, or Vinegar, till it be tender, and become fit to be eaten. They likewise feed the Fire they boil withall by putting VVood thereon, whereby the heat may be kept up, and no impediment may betide their VVork: And this is the way and method observed by the Female Sex in their boiling.

But as to their washing off the filth from their Cloaths, they are wont in the first place to pour hot Warer thereupon thereby to wash off the more gross part of the Dirt: and then they use a sharp Lee, or some Sope, or even both together to take away the remainder of the filth, and to wash out all the Spots and Dirt, then do they agen wash off the Sope and Lee with fair and hot Water: But as for the odour that the Sope leaves, and which by no washing how much or how oft soever it be done can be carried off, to get that off I say they are wont to lay their Linnen out in the open Field, and sprinkle and moisten it with pure Water, which being dried by the Sun, Air, and Wind, they do agen repeat the same labour, untill all the stinking smell of the Sope be drawn forth by the Sun and the Air, and a better and more wholsome Odour come in its room. Then at last they dry them at the Air and Sun, and being dry, they fold them up and put them in their Chests and Trunks, and keep them for their use.

Just so do we deal with Metals, when we wash off their defilements, and do by boiling turn them into wholsome Food or Medicaments; but yet we do not use common Vinegar, common Salt, and common Spices, but mineral or metallick subjects, as also a duplicate Fire, *viz.* one of them is a secret, philosophical, moist, cold, and vaporous Fire; and the other is the elementary and common Fire, by which we stir up the former Philosophical Fire to display its virtues, and render it powerfull and efficacious.

The elementary Fire we make with Wood, Coles, or Oil: The universal Agent, or Philosophical, Cold, Moist, Digesting, Penetrating, Mundifying, Bettering, and not Burning, but Conserving, and vaporous Fire, we seek for in Salt, and leave the Operation to the vivifying Sun and Air; which being well done, we obtain wonderfull Plants, and most efficacious Food, or Sawce for our Life.

And forasmuch as my purpose here is, to treat of such metallick and medicinal Sawces, I will here in God's name adjoyn some of them, which being as so many samplers or patterns, every one may at his pleasure imitate in composing and making of the like. And he will here find a way of confecting some good Medicament, as clearly and evidently demonstrated by me as was lawfull for me to do, nor was it in my power to discover the same more perspicuously: And therefore I beseech every one to take in good part what is here presented, and to forbear to trouble me for the time to come with needless questions.

So then, seeing I am about to treat in this place of metallick Sawces, it is also behovefull to have a metallick Sugar and Spice, and this, *Saturn* will afford us in the steed of the common [Sugar] by whose help we reduce *Sol* and *Lune* as being most excellent Spices, into most effectual Medicines.

Nor would I have it seem strange to any one that I use Lead here instead of Sugar, for the inmost juice of Lead, doth exceedingly out-go the sweetness of any Sugar, which thing *Isaac Holland* doth very evidently testifie in his Treatise of *Saturn*. The Chymists do frequently extract a sweet Salt out of Lead, with distilled Vinegar, and call it the Sugar of Lead, and do very well know and find that there is such a sweetness in Lead as is not in any other Metal beside. From it therefore will we prepare our Sugar to make our metallick Sawces withall, as follows.

Take of Lead-aſhes one, two, three, or more pounds, which put in a ſtrong well glazed Earthen Pot, then pour thereupon ſome Wine or Ale, Vinegar, or Vinegar of Honey, as much as may over top it an hands breadth. Set your Pot upon the Coals and make the Vinegar boil.

N. B. The Aſhes are to be unceſſantly ſtirred, in the boiling with a wooden *Spatula*, leſt they gather into one entire ſolid Maſs: After that the Vinegar has boiled for about half an hour, and is become yellow, and as ſweet as Sugar, you muſt decant it from the Aſhes, and pour on more, and agen boil it, and extract more ſweetneſs, and this labour muſt you repeat ſo often untill the Vinegar can extract no more ſweetneſs; then having put all theſe Vinegars together, pour them gently off from the Fæces that ſettle in the bottom of the Veſſel, and being thus ſeparated, filter the ſame through Cap Paper or by a filter, that ſo the Liquors may be very clear, and may give you by ſeparation, that ſweetneſs of the Lead which they hold up in them.

Into theſe clear Vinegars, therefore being put in a Glaſs Veſſel, pour thereinto (by little and little) as much rectified Spirit of Salt, that ſo the yellow Vinegar may be turned into a white Milk, and may by little and little ſettle to the bottom like curdled Cheeſe, from which the Vinegar being now become agen clear is to be removed by decanting; then put the Saturnine Cheeſe in ſome ſtrong Linnen Cloath and tie it hard up, and ſqueeze out the reſidue of the moiſture, and ſo dry it and lay it by for uſe. It is a moſt tender Powder, of a bright ſnowy colour, and void of all taſt; for in the precipitation, all the ſweetneſs being introverted by the Spirit of Salt, hath hidden it ſelf within, which doth again afterwards (when that maſs ſhall be reduced into a Sawce) ſhew it ſelf, and diſcovers its former taſt, as we ſhall hear anon.

I would have the friendly Reader know, that I am not minded to produce here many and divers Operations, for I am ſtraitned in my time, which ſtops me from giving you a more prolix and circumſtantial deſcription: I do onely propoſe ſome few, and leave every one to his fancy to make the reſt of the Sawces or Medicaments, according to the ways here preſcribed, according to his likeing, and that as many as he will, and out of ſuch ſubjects as beſt pleaſeth him.

But that I may contract theſe things concerning my Sawces into a narrow room, I ſuppoſe it is well enough known, that Sawces and Junkets are diſht out in the ſecond courſe for this end, either to cloſe up and ſtrengthen the Stomach, or that if a ſudling ſtorm be at hand it may drill the readilier down into the Stomack by theſe kinds of Vehicles.

But yet my purpoſe is not directed to this end as to teach the making of ſuch banqueting Diſhes in this place, as may allure Wine into the Stomach by ſuch an unprofitable Prodigality, and ſo detriment the Body it ſelf too. No, but the main drift of my Sawces ſhould rather be this, *viz.* to remove that evil which is ſtirred up in the Body of Man, by the common Junkets and the overmuch guzling in of Wine, and to ſtrengthen the Stomach, Heart, Brain, and other Members of the Body, to heal the parts that are hurt, and in particular, to reſtore them to their former health: And finally, to be as a kind of guide and manuduction to lead on the Ingeny of Men in ſuch wiſe, as that they may by an eaſier way arrive unto the Knowledge of the univerſal Medicine.

To begin therefore, I confeſs that of [all] fruits preſerved with Sugar, none have a more gratefull taſt on my Palate than Bar-berries, and Ribes, or St. *John*'s Grapes as they call them; which fruits, preſerved up with Sugar, do not onely get the Stomach an Appetite, but do withall allay Thirſt, and do extinguiſh all the internal heat ſtirred up and kindled by overmuch drinking: The like metallick Sawce or Junket ſhalt thou prepare on this wiſe.

Buy ſome Steel filings of the Needle-makers, and take thereof as much as you pleaſe, diſſolve them in rectified Spirt of Salt, which Solution will be green, and be of a ſweetiſh taſt; abſtract the inſipid Phlegm, inſipid I ſay, for although it be a very ſtrong Spirit of Salt that is poured upon the Iron, yet nevertheleſs no Spirit comes off, but onely an inſipid Phlegm in the abſtraction and diſtillation, and the Irons retains all the acidity of the Salt, and remains a red, ſweetiſh, aſtringent Juice.

Take of this, and of the Saturnine Powder which we taught you the making of but now, of each alike weight, and put them into a well coated Retort, and the *Saccharum Saturni* will preſently drink up the Juice of the Steel. Put the Retort in a Veſſel fill'd with Sand, and augment the Fire by little and little that all the inſipid Phlegm may be wholly drawn off. When 'tis all come off, and that acid drops begin to come, then muſt you apply thereunto a Glaſs Receiver, and the Fire is to be encreaſed by degrees untill the Retort be throughly red hot, which muſt continue ſo about an hour, or half an hour a leaſt. By this means, the Spirits of the Salt which were in the Steel, do almoſt wholly come over into the Receiver, and do carry over with them [the Spirits] of the *Saccharum Saturni*, and oil of *Mars*, in the form of a red ſublimate, which ſettles it ſelf in the neck of the Retort, which ſublimate when the Retort is cold and broken you muſt take out of its Neck, and keep it from the Air, for in the Air it will diſſolve into a red, ſweet, and Aſtringent Oil, of no ſmall virtues in Medicine and Alchymy. In the bottom of the Retort you will find a molten Maſs, reſembling *Lapis Hæmatitis*, which being ſeparated from all defilements, will give you a red, brittle, fuſile Stone, and in ſome ſort aſtringent, of great virtues in Medicine, and without doubt in Alchymy too, if it were but firſt made conſtantly to abide in the Fire. And even this too, muſt you keep from the Air, for it is ſtill impregnated with the Salts, and therefore is eaſily reſolved.

Now when you would make uſe of this Stone in Medicine, break a little bit thereof into ſmall Powder (for it is no harder than other Salt, and therefore doth eaſily admit of grinding to Powder.) This Powder heals both internal and external Wounds and Ulcers, being adminiſtred in the quantity of two, three, four, five, ſix, or more Grains, according to the age and condition of the Sick, and being taken in a convenient and proper Vehicle, it is highly Sanative and a ſtopper of Bloud. Being applied externally to Wounds, it wonderfully forwards healing; hinders all Symptoms, and fundamentally dries, and cures all Ulcers and Fiſtulaes, if uſed outwardly and inwardly too.

It doth moſt ſafely and moſt certainly help all the overflowing of the Menſes in Women, and is ſo excellent a Medicament in the *Dyſentery*, *Lientery*, and other *Fluxes* of the Belly, that its like is not to be found.

Thus

Thus have we that true and genuine *Hæmatitis* of the Ancient Phyſicians, of which they have written ſo many things, but what through the careleſneſs of the Phyſicians that ſucceded them, and what through the length of time it became wholly loſt, inſtead of which there hath been hitherto uſed the inſoluble and hard Stone of Iron.

The Ancients impoſed upon their more noble Medicaments, Names deduced from ſimilitudes or reſemblances, as may be ſeen in this our living *Hæmatatis*, and in the dead *Hæmatatis* of the common Phyſicians, which is call'd for at the Apothecaries, and adminiſtred to ſtop Bloud withall; But yet it is nothing elſe ſave the Stone of Iron, and ſuch Oar as is very rich and abounding with this Metal, the fragments of which appears [either] in the form of ſpear-like Stria's or Streeks, or like a cleft ſtone. This our live *Hæmatitis* is of the ſame form, but ſoluble, and is of a very pleaſant and aſtringent ſweetneſs, and containeth moſt efficacious virtues for the allaying of all bloody Fluxes both outward and inward. Now that common and well-known *Hæmatitis* doth not poſſeſs any more virtues than that Iron Scinder-duſt which the Smiths ſmite off at the Anvil, doth. And as for that red Sublimate which aſcended up in the neck of the Retort, it is twice ſtronger in ſubduing the afore-mentioned diſeaſes, but it is not of ſo ſweet a Taſt as is the Stone it ſelf, which reſided in the bottom of the Retort. And being externally applied in cleanſing and mundifying old Fiſtulous Ulcers, it works much ſtronger than this our *Hæmatitis* (which is more pleaſantly adminiſtrable in internal defects) doth. But whoever he be that knows how (by many Solutions and Coagulations) to make this Stone conſtant in the fire, will obtain a far more excellent Medicament: concerning which, we will ſpeak more in the end of this Treatiſe.

This now is ſuch a Sawce or Junket, as every good Phyſician and Chyrurgeon hath juſt cauſe moſt highly to eſteem in all Fluxes and Sores, both old and new, if he would obtain that repute which he thirſteth after; for it is endued with great Virtues, whereas on the contrary, the Juyce of Sloes, the common *Hæmatitis*, and *Crocus martis*, are, in compariſon of this, to be accounted of as meer dead Medicaments. I could tell you of more virtues that are in the red Sublimate, and this in an eſpecial manner, *viz.* that without being either bound on, or inwardly taken, but ſympathetically and at a diſtance, it is able to cure any iſſues of Blood whatever. But I ſhall doe better to paſs theſe things over in ſilence, becauſe to the greateſt part of unskilfull Men, they will not onely ſeem wonderfull, but impoſſible likewiſe. However, I commend to every ones acceptation this ſo excellent a Medicament, for all internal and external Iſſues of Blood, in all wounds and hurts, as alſo in all the obſtructions of the Spleen, Liver, and other members of the body.

After ſuch a manner as this, may any one eaſily turn all the Metals into Sugars, and into moſt excellent Medicaments. But foraſmuch as the Metals are not all of them indifferently fit to be adminiſtred inwardly to the ſick, I will make mention of Gold and Silver onely as being the beſt of all, and paſs by the others, and will teach the preparation of yet more Sawces and Junkets; Copper, Tin, and Argent-[*vive*] are ſomewhat cruder bodies, and require greater care and diligence, to have the Title of good Medicaments. We will therefore let them paſs, as having Gold and Silver at hand, which are more ripe.

The manner of Preparing a good Sawce or Junket out of Silver, which helpeth the Diſtempers and Diſeaſes of the Brain.

THE skilfull Chymical Phyſicians have aſſigned Silver for a Medicament for the Brain, which Aſſignment of theirs I acquieſce in, and doe here preſent you with ſuch a Sawce or Junket as is of moſt eſpecial uſe for the ſuccouring of the Brain.

Take of common *Aqua Fortis* (ſuch as is commonly uſed about the diſſolution of Silver) one pound: In two ounces of which you muſt diſſolve one ounce of pure Silver; Diſſolve likewiſe one ounce of Lead by it ſelf: Put both Solutions together in a glaſs with a wide mouth; and being thus mixt, pour thereupon as much rectified Spirit of Salt as is ſufficient for the precipitation of both the Metals. Pour off the clear water from the precipitated Metals, and pour upon them ſome freſh water, and ſtir them well about; which done, and the precipitated Calx ſettled to the bottom, the water is to be again decanted off, and more freſh water poured thereon: and this Labour is to be ſo often repeated, untill that precipitated Powder be void of all Acrimony: then put it in a pure linnen Cloth placed in a Funnel, that ſo the remaining moiſture may drain from it. Then tie the cloth very firm, and ſqueeſe out, in two balls (or ſqueeſings) all the reſidue of the moiſture out of that ſilvery Cheeſe, and lay the ſame upon Cap-paper, and that will drink up all the reſt of the moiſture, and will ſoon dry your Cheeſe. This Cheeſe (or precipitated Powder) is to be put into a well coated Glaſs-retort, and to be forced with a gentle fire of Sand, that ſo all the ſuperfluous moiſture may be ſeparated. Then, at laſt, the Fire being augmented, will force out part of the Silver and Lead in the form of white Flores, aſcending up in the neck of the Retort. Now when the Retort hath been thus kept red-hot for one hour, let the fire go out of its own accord, and take out the cold Retort, and break it, and you will find in the bottom of the ſame a white and ſweet Stone, which will melt (upon a red-hot Plate of Metal) like Wax, and penetrate the ſame, and is volatile like *Argent-vive*. Two, three, four, five Grains, even to eight or ten, of this Stone ground into a Powder, being adminiſtred (reſpect being had to the Patient's age and ſickneſs) yield a moſt preſent comfort in the diſeaſes of the Head and Brain, and ſo are thoſe white Flores wont to doe likewiſe: but in Chymical operations they are of eminent uſe. Now although this Stone be it ſelf of a fugacious nature, yet notwitſtanding in progreſs of time it makes *Mercury*, together with it ſelf, conſtant in the fire; of which thing I have elſewhere already mentioned in my Writings, ſo that I need not ſay any more thereof in this place.

However, I cannot omit to tell you, that, although, otherwiſe, there is no familiarity at all betwixt Silver, and Lead, and Salt, yet nevertheleſs theſe three may be ſo prepared as (by a certain mixtion) not to refuſe each others ſociety. Hence it comes to paſs, that if the Salt be rightly fitted for this operation, it puts forth more powerfull virtues, and for that reaſon doth the Silver ſuffer the more, and doth by ſo much the ſooner attain to a conſtancy in the fire; and ſo 'tis evident, that the name of Alchymy or fuſing of Salt, was not impoſed on this Art for nothing.

For

For by the help of Salt, are the Metals to be molten and meliorated, which thing you may take notice of.

Another Sawce or Junket made of Gold and Silver.

TAke ſome pure Silver, and diſſolve it in *Aqua Fortis*, and precipitate it with Spirit of Salt, and free it from its Acrimony with common water, and ſqueeſe out the water, and lay your matter upon cap-paper to dry, and deal with it in all reſpects as we ſpake afore in the Proceſs of *Saturn*. Of this Calx take three parts, and one part of Gold diſſolved in the Oil of Salt; and firſt put your Silver Calx into a ſtrong Glaſs-retort, which muſt be well coated, then pour thereto your yellow Solution of Gold. Place the Retort in Sand, and, firſt, force out your Spirit of Salt, in which forcing out, the Calx of the Silver will retain with it ſelf the Gold; and of them both will be made a purple Stone, inclining ſomewhat to redneſs, fuſile, and volatile. But the Oil of the Salt will carry up with it ſomething of the Gold and Silver into the neck of the Retort; which, together with the aforeſaid Stone, you ſhall take out of the broken Retort; but yet you muſt keep each apart, for a medicament of great moment: [both] which (if they were turned (by Solution and Coagulation) into a fix Ruby,) would doubtleſly perform their work, in the metallick Operations, with greater benefit and profit.

So have you here, briefly deſcribed, the third Junket, which, ſhould it be deſcribed with all its Circumſtances, the Proceſs it ſelf would in good ſooth be more prolix and tedious than is fitting. And foraſmuch as my Writings may ſeem unto many ſufficiently tedious, 'tis but fit that I aim at brevity here in this place; though (on the other hand) they will ſeem (I well know) too ſhort and brief unto others. But *Jupiter* himſelf pleaſeth not all alike. And the birth-day of him who can ſatisfie all, is yet to come; for he is not as yet born. For behave thy ſelf as thou wilt in thy actions, either in briefly delivering thy ſelf, or in uttering thy mind in a longer diſcourſe, thou ſhalt not at any rate fulfill the expectation and deſire of all men. I doe therefore here diſh out this Junket, and commit the care of eating the ſame to the Gueſts. Every one that will, may more accurately weigh and conſider of the ſame, that ſo he may come to find, how great the Efficacy and Utility of this Proceſs is, though delivered ſo very briefly.

Another Junket or Sawce, viz. *A Confection of a Mineral* Alkermes.

THere is in the Apothecaries ſhops a Confection made of the Berry or Grains of *Kermes*, known by the name of *Confectio Alkermes*; in which compoſition, there are added to the ſaid Berries ſome Pearls done into Powder, and Leaf-Gold, and Amber-greaſe, and other ſuch-like corroborating Simples. This medicament being confected with Sugar, is lookt on as the chiefeſt amongſt all thoſe Medicines which are wont to be adminiſtred for ſtrengthening the Heart, and it merits the praiſe aſcribed to it. But now inſtead of the Leaves of Gold, (which cannot be digeſted or concocted by the ſtomach, and are therefore carried forth with the Excrements without any operation,) I will ſubſtitute another Gold, which being made ſuitable, and accommodated unto nature, ſhall be able to put forth its virtues, and ſupply the place of foliated Gold, in the Confection of Alkermes.

And if any one be ſo minded, he may omit even the grains or the berry it ſelf (for they are not to be had every-where) and make uſe of this Juyce of Gold, which I am about to teach in this place, and mix it with Sugar and other Powders that are ſtrengtheners of the Heart. For this Golden Confection of a purple Colour, doth moſt notably ſtrengthen the Heart by its corroborative virtue, and the Gold it ſelf gives a far more excellent purple or ſcarlet Colour than the Grains of that berry doe, which are brought us from *Mompelier*. The way of preparing the ſaid Gold, is as follows.

Diſſolve the Calx of *Sol*, or of Gold, in ſtrong Spirit of Salt, and pour upon the Solution ſome three or four parts of water more than the Solution is, that ſo the Acrimony of the Spirit of Salt may be ſomewhat allayed. Being thus prepared, put thereinto a bit of Tin, and ſuch as hath no Lead commixt therewith, which ſaid Tin, the allayed Spirit of Salt will ſeize upon, and diſſolve part thereof. And being alſo debilitated thereby, it will let fall all the Gold that it contained, in the form of a purple Powder, adhering partly on to the Tin, and part will be of its own natural colour, and ſettle to the bottom, but as ſubtile as the Atoms that fly about in the Sun-beams, and reſembling little ſtars. When therefore the whole body of the Gold is precipitated into a moſt delicate and fine Powder, out of the Spirit of Salt, which will now be clear and bright: Pour off the Spirit, and take the Tin out from the Golden Powder, and waſh the Powder with clean and pure water, that ſo none of the Spirit of Salt may be therein diſcerned; and being now thus prepared, it may be uſed inſtead of Gold about the Confection of Alkermes.

Moreover, if you are ſo minded, you may take ſome pure Sugar-candy, and make it up into a ſyrup with weak Spirit of Salt, and then put thereunto this Golden Powder with a little Amber-greaſe and ſome Powder of Pearls, and ſo make full as good, nay a better Confection than that common *Confectio Alkermes* is; becauſe a greater corroborating of the powers of the Heart, and a delicater purple Colour cannot be found in any other thing than in Gold. If now you operate aright, it cannot otherwiſe be but you muſt needs attain to this purple and golden Confection.

N. B. The Tin muſt be very pure and clean, for by how much the whiter it is, and the acuter ſound it has, ſo much the fitter is it for this work. And in the Compoſition it ſelf you may uſe this following weight or meaſure.

Take of the Calx of Gold one Lot [or half ounce] and diſſolve it in three or four Lots of ſtrong rectified Spirit of Salt: Pour unto the Solution twelve or fifteen Lots of pure water; then to all this, put two Lots of Tin, and ſet the Glaſs that the Solution is in, upon hot Sand, and heat it ſcalding-hot, but let it not boil. When it hath thus ſtood for one or two hours, all the Gold will be turned into Powder, of a Purple and Gold-like hue, and ſettle to the bottom. Then having poured out the Water, and ſeparated the Tin, ſeparate all the Acrimony from the Powder by ſeveral waſhings, and ſo will you have it fitted for the Confection. This done, take twelve Lots of Sugar-candy, and one Lot of rectified Spirit of Salt, and as much pure fair water as is ſufficient to reduce the Sugar into a thick Syrup; Hereto

add

add one Lot of that purple and tender golden Powder, and it will tinge all the Sugar with a Purple or Scarlet-colour. Then add likewise thereunto, two Lots of Pearls made into fine Powder, and one Quintula (about two drams and an half) of Amber-grease, mix them well together and set it by for use, as being a most efficacious Confection. And if you please, you may add to the former ingredients other strengthning and refreshing Powders. The Dose of this Confection is from 3, 6, 9, 12, 15, to 20 Grains, according as the persons are. It corroborates the Heart, Brain, and the whole Body, and doth likewise (by reason of the Spirit of Salt) allay thirst, and stirs up the appetite to food.

And thus much may suffice this time about Sawces or Junkets. It now remains that we likewise search after some select and harmless Purges out of the Metals too, and adjoyn them to the former. When in feastings (or merry-meetings) the Guests are wont to drink Healths to their Lords, and tope off many Cups, and store of Glasses full of strong Wine, it cannot possibly be, but that their Stomachs must be stufft with tenacious and clammy humours, and the Head much oppressed with Catthars, and the Bowels fill'd with store of wind. Now here cannot be a better and more profitable way of succouring these Stomachs and Heads, thus beset with so many tenacious humours, and of helping the whole body thus corrupted by so often repeated draughts, than by a purgative Medicine, which by expelling all the evil and offensive humours opens all the passages of the Body, and again brings the so necessary respiration. We will therefore present you here with three such purging Medicaments, and those very good ones. One is of Antimony; The second of Silver and Antimony; And the third of Gold and Antimony: Each of which, by it self, doth far exceed the other purging Medicaments made of the Vegetables.

For Metals do penetrate the Body far better, and do perform their Operations with less hazard than the Vegetables do, most of which abound with a resinous clammines, which doth often stick to the Bowels, and cause great gripings, which is not to be feared at all from metallick purgative Medicines: which (upon this account) are to be preferred before those that are prepared of the Vegetables; nor do I contemn these Vegetable Purges, for they are good, and may be made use of, where better are not at hand.

Therefore, forasmuch as I have in my time, made trial of many such Medicaments, and have in very deed found, that metallick Purges do excel the Vegetable ones both in pleasantnes and efficacy, and are far safer; I could not but commend the same above all other Purges to such as come after me, but yet leaving every one at his pleasure to make use of either these or them.

A Purge of Saturn.

Dissolve two ounces of Lead in pure *Aqua Fortis*, and pour upon the Solution one ounce of Butter of Antimony, that so they may be precipitated together into a white *Coagulum* or Curd, whereto you must put a good quantity of fair water, and stir it very well about, that it may imbibe the Spirit of Salt which was in the Butter.

Then pour off this water, and put on more, and repeat this labour so long, untill all the sharpnes be washt out of the precipitated Powder. This white Powder being dried is a most excellent Purge, educing all evil and hurtfull humours out of the Body without danger, and being administred from one Grain to ten, according as the Patient is, doth work downwards, especially when it is given in a lesser Dose. But if there be need of vomiting too, then the Dose may be encreased, especially unto those that can brook vomiting, and cast with ease. It may be used without danger as a good and safe Purge, in all such Diseases as purgative Medicaments are, and may be administred.

A Purge of Lune.

Dissolve two ounces of pure Silver in four ounces of *Aqua Fortis*, and pour upon this Solution one ounce of the Butter of Antimony, which together with the Silver will go into a white Curd, as we said but now of the Lead in the preceeding Process. Wash this Powder with common water, and dry it and administer it in the same Dose as the Saturnine Powder is to be given; and it will perform its part in all Diseases, but especially in those of the Head.

N. B. The Butter of Antimony must be made of the *Regulus* of Antimony, with rectified Spirit of Salt, and not with *Mercury* sublimate, as the common custom is.

Purging Gold.

In the first place, you must make a most strong Spirit of Niter thus, *viz.* put equal parts of calcined Allum and good Salt-peter into a well coated Retort, out of which is to be drawn (leisurely and by degrees into a very large Receiver luted on to the neck of the Retort) a Spirit, which will make the Receiver look red. All the Spirit being distilled, let the Fire go out of its own accord, and leave on the Receiver so long till all the Spirits are setled, and that the Receiver be become clear agen: Macerate the Lute, which joyned the Receiver on to the Retort, with water, and have an especial care when you take off the Receiver, that none of the Lute fall into the Spirit. Put the Spirit in a strong Glass, and shut it up well with Wax, that it may not exhale, for it is very strong, and is red as Bloud, because it had no water put unto it in the Receiver.

Pour two ounces of this strong Spirit upon one ounce of the Butter of Antimony, and it will presently pass into a red Solution, whereto put one ounce of pure Gold that it may be dissolved, which Solution will be redder than Bloud. Then pour in thereupon some common fair water, and the Antimony and the Gold will precipitate into a Purple Powder, which is to be washt well with water, and so dried.

Its Dose is from one, two Grains to six, (according as the Age and Party is,) it may be given in Wine, Ale, Water, or any other Liquor, which may be as a Vehicle unto it. It works without any danger, and doth safely and pleasantly (beyond all other Purges) drive out all offending Humours out of the Body of Man.

Aurum Diaphoreticum, *or Sweating Gold.*

If no water be poured upon the just-now-spoken of red Solution, thereby to precipitate the same, but

that that ſtrong Spirit of Niter be drawn off by a Retort, it then takes from the Antimony its purging and vomiting power and makes it Diaphorical. Nor needs the Purple Powder, when it's taken out of the Glaſs, any waſhing at all, becauſe being adminiſtred in two, three, four, five, ſix, or ten Grains Doſe it may be ſafely taken, and it provokes Sweat. It is therefore very profitable in all the Diſeaſes that are to be expelled by Sweat; yea in the Leaproſie, Gout, Dropſie, French-pox, Plague, Scurvey, and in all Feavers doth it play its part even to admiration, for (by reaſon of the Gold which it contains in it) it doth both provoke Sweat, and ſtrengthen the powers of the Body.

The former Powder or purging Gold, being mixt with an equal weight of purging *Lune*, or purging *Saturn*, and molten in a Crucible, turns into a red Stone or Glaſs, of which, little Tablets or Pellets ſomewhat bigger than a Pea may be again caſt or molten, and kept for uſe. And now when there's need of purging, let one of thoſe Tablets be put into ſome ſpoonfulls of Wine and lie therein all night, and let the Wine be drunk off in the morning following, juſt after the ſelf ſame manner as other purges are wont to be adminiſtred. For there is ſo much virtue extracted by the Wine out of the glazen Tablet as to give ſeveral Stools. If one Tablet or Pellet be not ſufficient, then may a ſecond, or a third, or more be adjoyned thereunto, and ſo left all night in the Wine, that ſo the Wine may work more effectually if need requires. The Tablets or Pellets remain good a long time, and may be many times applied to the ſelf ſame uſe.

But if any one ſhould be deſirous of performing this labour even yet better, he may get a little Pot or Cup to be made for him of white Earth, and and may have it glazed both inſide and outſide with this ſame Glaſs; for two or three Spoonfulls of Wine infuſed for a night in ſuch a Cup, and drunk off next morning, are capable of purging you even as doth the other.

Theſe are the effects of theſe purges in Medicine. They likewiſe do ſome good in Alchymy, if all three of them, *viz.* the Saturnine, the Lunar, and the Solar are reduced by melting into a Glaſs: this Glaſs being Philoſophically cemented ſomewhat of the Silver, Lead, and Antimony will be meliorated, and turned into Gold by the Gold.

Now for a Farewell, take this which follows. If the God *Appollo* the Inventer of Medicine, would beſtow his light upon any one, and by his hot Beams melt the waxen Wings of the untamed, flying, and (to his Father *Dedalus*) diſobedient Son *Icarus*, (and flying out of the Iſle of *Creet*, over the *Icarian* Sea,) that ſo he might fall down into the ſweet and ſulphureous Sea of the Sun, and may remain drowned therein: Then from this dead Body (which is not wont to be ſubdued by any other means) may a moſt excellent Medicine be prepared. For what way ſoever he is handled by otherwiſe, whether he be turned into a white ſublimate, or be reduced into a yellow or red precipitate, he is notwithſtanding always corroſive; and brings more hurt than good, and therefore may very deſervedly be eſchewed.

Or if we did but know the way of fixing it without any corroſivity, by thoſe three principal Columes of all Medicine, namely Vitriol, Sulphur, and Antimony, he would undoubtedly be adminiſtrable without any fear, and be withall capable of performing great matters. For then he would not ſtir up and cauſe ſo many purgations, and ſuch vehement Salivations, and other hurtfull ſymptoms as uſually comes to paſs, but would bring a moſt ſpeedy help to the Sick by his gentle operation by Sweat and Urine, and get the Phyſician a moſt eminent praiſe.

This I would have every one know, that Sulphur has a power of killing all Corroſives, and reducing them to a ſweetneſs, whether it be done by the dry way or by the moiſt. And of all Sulphurs, a Vegetable Sulphur is the fitteſt, which being freed from its inflamable nature, is capable of reducing [any] Corroſives, though never ſo great, unto a ſweetneſs in one hours ſpace. Nay more, any Metal being firſt diſſolved in ſuch like Corroſives, doth together with the ſame become a ſweet Medicament: And ſo when Gold is diſſolved in Spirit of Salt, and Silver, Tin, Copper, Iron, and Lead are diſſoved in *Aqua Fortis*, and that that Corroſive Diſſolvent is tranſmuted by a ſweet Sulphur, it ſo comes to paſs that the Metal together with the Corroſive is made a Medicament, and becomes potable. Such potable liquor of the Metals, (but eſpecially of Gold and Silver,) and void of all Corroſivity, will you meet withall in my Medical-ſhop; which liquor, as well thoſe of Silver, and Copper, as that of Gold, are red. The Liquor of Gold may be uſed inſtead of *Aurum Potabile*, and it guilds Quickſilver and the other Metals with a golden Colour, like as the Silver-liquor guilds *Mercury*, and Silver [or Copper, probably] with a Silver Hue; and the Coppery-liquor guilds *Mercury* and Iron with a Coppery Colour.

N. B. Aurora being inflamed with the love of *Jupiter*, and withdrawing him together with her ſelf into Heaven, if both of them be again thruſt down headlong by the other Gods into the Salt-Sea, they come forth out of this Bath, ſo delicate and ſo white, that ſhe reſembles the fairneſs of *Diana*; and he, the comlineſs of *Apollo*: but not as yet conſtant in the Fire. But when the time of bathing is over, *Mars* coming to the Sea Shore, draws both of them out upon a dry Iſland called *Irony*, from Iron; where they are yet once more waſht by *Vulcan*, (who makes uſe of *Saturns* help) in a dry Bath, who waſheth off the Defilements far more accurately than the Salt Sea could, for he leaves not off waſhing and purging them, untill all the Defilements are ſeparated from both their Bodies, and that they be made like unto *Diana* and *Apollo*, in Conſtancy and comelineſs.

Mars ſeeing that his Siſter *Venus*, and Brother *Jupiter* did come forth out of the Salt Sea with ſo lovely a fairneſs, leapt thereinto himſelf, that ſo by ſpending ſome time in waſhing, he might rinſe off thoſe black Defilements from his black Body. But there was ſuch ſtore of filth waſht off, as made all the Sea green and ſweet, and it hid [or ſwallowed up] *Mars* himſelf, being now much diminiſhed, inſomuch that he could never have eſcaped out of that Sea, had not *Sol*, out of meer pity on him, dried up the water of the Sea, for old limping *Saturn* to come unto him, and to take poor wretched him out of the Dirt and Mire, which he alſo did.

But becauſe there was ſuch a deal of Mire and Filth as that this (ſlim) lame, (hopping Fellow) could not get out agen, he even there ſtuck faſt with *Mars*, and ſo loſt his Life. Of the dead Bodies of theſe two, *viz.* of *Mars* and *Saturn*, *Vulcan* did at length

length make one Head having two Faces, or a double Countenance, one resembling *Apolo*, the other *Diana*; and upon this account was the name of double-visaged *Janus* bestowed upon it by *Vulcan*.

By these few and short Operations and Processes, may any one make and devise many more such like. I am not at this time, for my part, minded to busie and trouble my self about any more tedious a description of such matters, for I guess that in what I have already said and disclosed to the unthankfull, I have too much exceeded my bounds. Every one may choose to himself those things which he shall deem most profitable, and forbear to despise that which he shall not be capable of apprehending the meaning of.

'Tis a usual Proverb, *That a Cup of generous Wine must accompany Dainty Delicates.*

Because therefore we have in the three precedent Sawces or Junkets, presented you with fine savoury Cates, it is but fitting that we accompany the same with three dainty draughts, and those drawn out of the best of Metals too, namely out of Gold and Silver, because the Cates or Sawces themselves were composed of the same. Our Ancient Predecessors called those Drinks of old time *Nectar*, or the drink of the Gods, which in our days are known by the names of potable Gold, and potable Silver.

Concerning these two, do many of *Ignoramus* his Fraternity babble many Stories, and falsly boast that no true potable Gold can be prepared, or be in Being without the Philosophers Stone. This conclusion of theirs is clearly untrue, for a Man may easily make Gold and Silver potable, though he hath not any knowledge at all of the universal Medicine, which is to be thus understood, *viz.* when the Gold and Silver either alone or conjoyned, are dissolved in a sweet and not Corrosive *Menstruum*, and rendred fit to be administred to the Sick in Water, Ale, Wine, or any other Liquor. For those kind of Solutions may be taken for a simple potable Gold and Silver.

But now for any one to dissolve Gold in that corroding *Aqua Regis*, or Silver in *Aqua Fortis*, and then to imagine that he hath potable Gold and Silver, he is altogether in an Errour. Potable indeed they are, because they may be drunk like other Liquors: But forasmuch as those kind of Solutions do corrode all things, and bring extream Detriment, they are justly rejected, and the rather because being poured into Wine or Ale, they defile and thicken the same; which, no true potable Gold dissolved in a Not-corrosive *Menstruum*, will do, but when 't is mixt with Wine, Ale, or Water, it remains bright and clear. Besides too, true potable Gold must be of such a property, as to have no visible corporal Gold producible thereout of, and yet notwithstanding, be able to indue the meaner Metals, yea and *Mercury* it self with a golden nature, if they be therein boiled, or to coagulate and transmute them into Gold by the dry way in a Crucible, whether it be done with profit or without profit [it matters not.] Now this tinging virtue comes not from corporeal and dead Gold, but from a spiritual living and tinging Gold.

If therefore the common and corroding solution of Gold, cannot be accounted for a true *Aurum Potabile*, and that the spiritual and tinging Gold, which is dissolved without any corrosiveness should not come under this Title neither, whence I pray should it be sought for, and where should it be inquired after. I confess, I do easily perswade my self, that as for the first Ens of Gold if we did but know how to wash and purge it in such wise, as that being turned into a bloud-red liquor, it would admit of Distillation by an Alembick or a Retort, we should have a better potable Gold. But where shall we find such an Artificer, as can teach us the way of preparing such a potable Gold? 'Tis therefore our best way to content our selves with such Medicaments as we have at hand, so long untill God bestoweth better upon us. This likewise I believe, that if we did but know such an Artifice as to wash and purge Mercury, in such sort as that it might pass into a ponderous and sweet Water, and if we could so adjoyn some pure Gold thereunto instead of a ferment that they might lift up [or sublime] themselves together, and again become constant and fix: that then, from them would arise a red and soluble Carbuncle, or true potable Gold. But these are onely my simple thoughts and conceptions, no dispraise to those suppositions which other men have entertained concerning this matter. So likewise if spiritual Gold, and the spiritual Sulphur of the Vine be conjoyned by the help of Salt, they give a good potable Gold, which contains in it Gold potentially, but not actually or palpably, as may be seen in my Treatise of the true *Aurum Potabile*, which being clear like Water, and a bright or fair potable Gold, I do adjoyn to my Cates or Sawces instead of White-wine.

But even as White-wine the longer it is kept, the yellower it grows, so likewise white *Aurum Potabile* doth not retain its whiteness above two or three months, but becomes more and more yellow, and is at length turned into a redness, but still retains its tinging faculty. He therefore that shall not be well pleased with the taste of [my] Wine or potable Gold, let him tarry till being more old they become yellow or red, for then they are of a pleasanter taste, as having (through long Process of time) lost their Sulphureous Taste.

But as touching the manner of making that potable Gold, as also all other unpleasant, fugacious, and unripe metallick Potions, pleasant, ripe, fix, and sweet Liquors, that shall be revealed afterwards.

Furthermore, I do here serve out instead of a good drink, the golden-coloured Soul, or my Tincture made of Niter, of which I have spoken in the second part of my Spagyrical Dispensatory. It is of as much virtue in Medicine as that potable Gold is, which I made mention of but now, but performs nothing in Alchymy or in the Transmutation of Metals; but what it would do if it were made fix and constant in the Fire, I do not as yet know, for I have not as yet brought it to that pass. But how it may be made fix shall be presently shown. This very Tincture in the degree it is at present in, produceth great effects in Medicine, yea and greater too than those which I published about it, in the second part of my Spagyrical Dispensatory. It is of a delightfull Taste to the Palate, it removes the obstructions of the Liver, Lungs, and Spleen, it provokes Urine, expels the Stone, prohibits Obstructions with the Excrements, it may be most safely used by old and young, yea even by those whose strength is much debilitated, and it is wont to afford them present help; it wonderfully Corroborates, and makes all Animals, Minerals, and Vegetables fruitfull, and this will easily appear so to be, if you do but take some Vegetable Seed and macerate in the same, and then put in the Earth, it grows far spee-

dier

dier and ripens much ſooner than other Seeds are wont to do.

I have ſometimes macerated Wheat, Barly, Peaſe, and the Seeds of ſuch like Corn in this Liquor for a night, and being thus ſteeped, have ſown it in pure Sand, and they have grown ripe far ſooner than thoſe which have been planted in good and fat Earth: which is ſuch a thing, as hath made many Men extreamly to wonder, when they ſaw Corn grow in bare Sand without any other Earth or Dung, and be able to arrive to ſuch perfect maturity.

Many other Salts there are of no great coſt, and ſuch as are to be had in vaſt quantity, with which, Corn being macerated and ſown in barren Lands, and in ſuch as are not dunged doth come to perfect maturity; and this I have tried not onely once, but oftentimes; and have alſo purpoſed (if God pleaſe) to bring it into publick uſe, in theſe United Provinces: to which end, the moſt Supreme Orders, General and Provincial, have granted me a Priviledge (or Patent) for many years; whereby it is forbidden to ſow or plant barren, ſandy Grounds and undunged, after this kind of way, without my conſent. The main Baſis of the knack lies in Sea-ſalt, which may be plentifully had in theſe places, and be eaſily prepared and made uſe of (to fatten lean and dry Grounds with) inſtead of Dung.

But amongſt all ſuch-like Medicaments, the Tincture of Nitre bears away the Bell, for it cauſeth many Stalks to ſpring up out of one Grane, and to yield fruit, a thouſand fold. Nor doth it onely make the Vegetables fruitfull, but Men too, and the terreſtrial Animals, and even the Birds themſelves that live in the Air. And by the ſame reaſon alſo may it be brought to paſs, that even the Metals may be multiplied by the help thereof, as we ſhall declare anon, in what follows.

Both theſe Wines or efficacious Drinks doe very well ſuit with the metallick Sawces or Junkets, they heat the Body, help the concoction of the Stomach, corroborate the Spirits, give good Nouriſhment, drive forth out of the Body the ſuperfluous Excrements, in a due manner by Stool and Urine, they cauſe Chearfulneſs, beſtow a proſperous Health, give a comely Look, and change the Complexions into the Sanguine and beſt Complexion; in the accompliſhment of all which things, that pure and golden coloured Tincture of Niter excells.

And here I muſt make a little digreſſion, and ſet ſomewhat more clearly afore your Eyes, the four primary Complexions; from which the other mixt ones do ariſe, according as a Man partakes the more of this or that Complexion.

Therefore as touching the Complexions, the Ancient Phyſicians judged thereof according to the form and colour of the Hair, and were of this Opinion, that the Sanguine Complexion which of all others is the pureſt, produceth red Hairs and a white Skin full of ſmall and bright Pores, ſuch Men being indued with hot and moiſt Bloud, and of a ſound Conſtitution are diligent, learned, pious, prone to Venery, Ingenious, Chearfull, and for the moſt part long liv'd, but are ſubject to hot Diſeaſes, as Feavers, the Plague, and the like; and do in their nature reſemble the Sun, amongſt the Planets, and Gold amongſt the Metals.

The *Cholerick* have very black Hair, a yellowiſh Skin, and their Bloud is hot and dry, and they are wrathfull, quarrelſome, ſtrong, bold, Warriours, addicted to Whoredoms, ſubtle, wicked, falſe, mercileſs, rejoycing at others harms, as is wont to be in War. They are tormented with raging Feavers, as alſo with the overflowing of the Gall, and they are of the nature of *Mars* and *Venus* amongſt the Planets; and of Iron and Copper amongſt the Metals.

The Hairs of the *Melancholy* Complexion are for the moſt part betwixt a white and black colour, and their Skin is white. They are of a cold and dry nature, quiet, laborious, muſing, induſtrious, ſincere, pious, and mercifull, inclined rather to weeping then laughter, if they hear of any miſchances, they aim at Juſtice, and fear God without Hypocriſie, or eſteem of Men. They are ſubject to all kinds of Diſeaſes, are afflicted with a debility of their Limbs, and are compared to *Saturn* and *Jupiter* amongſt the Planets, and to Lead and Tin amongſt the Metals.

The nature and property of the *Phlegmatick* is moiſt and cold, the Hair and Skin white, the Wit dull, a dreaming ſleepy quality, negligent, carefull of nothing, obſtinate, envious, ſlow, and groſs, and unteachable, the Body conſiſts of thick or homely Limbs, and is wont to be troubled with the Scab, Ulcers, and cold Feavers. 'Mongſt the Planets the Moon, and 'mongſt the Metals, Silver, are ſuppoſed not much to differ from their Diſpoſition.

Theſe are the marks (as is believed) of the Complexions in Men and Beaſts. But yet you are to know, that one [ſingle] Complexion doth very rarely bear abſolute ſway in any Man, but they are for the moſt part mixt, and ſo the denomination is given according to the predominant Complexion.

A Man that conſiſts of a ſanguine and phlegmatick property, is as it were double complexioned, and both the colour and denomination are divided, ſo that from red and white, yellow hairs ariſe, and the Men themſelves are of a good, temperate and fruitfull nature; and thus is it to be underſtood of other Commixtions.

But foraſmuch as a pure and ſanguine complexion is eſteemed the beſt and wholſomeſt, the Ancient Phyſicians in their Cures were wont to call the ſuperfluity of any phlegmatick ſcabby perſon, Phlegm and watery Blood: [the ſuperfluity] of the Melancholick, ſad and irkſome cogitations [or penſive dumps:] and [the ſuperfluity] of Cholerick, a mad raging brain. Now of this Phlegmatick, Melancholy, or Cholerick [perſon] do we make a Sanguine one, that is, a Man of a ſound and pure blood. Upon this account have they aſcribed this property unto their Univerſal Medicine, *viz.* that it does not onely change all the imperfect complexions of Men, as the Cholerick, Melancholy, and Phlegmatick into the Sanguine; but doth alſo tranſmute all the imperfect, unripe, groſs, and volatile Metals into pure Gold. For if a Medicine be of ſo much virtue as to convert all the Complexions into the Sanguine one, it will neceſſarily tranſmute all the imperfect Metals likewiſe, as *Saturn*, *Jupiter*, *Mars*, *Venus*, *Mercury* and *Lune* into *Sol* or Gold.

Now foraſmuch as I have often found by the frequent Experiments that I have made, that my ſaid Medicine, or Tincture of Nitre is wont to colour all kinds of Hair, as white, brown, black, (black I ſay, which may ſeem impoſſible unto many, but nevertheleſs is very true; for to dye white Hair with a yellow colour is a thing commonly known, but to tinge black Hair with a yellow or red colour, is a great ſecret) and even all other colours, none excepted, with a golden colour; and this it does while it

it is as yet of an unripe and flying nature: Upon this account I dare perswade my self, that if it were but brought to a fix and constant nature, it could not possibly be, but that it would bestow upon the imperfect Metals, a golden nature and perfection. But by reason of its too tender a nature, which is extreamly impatient of a Fire of Coals, I pondered upon the business more accurately, and perceived, that it is indeed a thing possible to be done, although that hitherto I never had a convenient time of perfecting of the same. And as concerning the manner how it may be done, I cannot but out of Christian Love, discover the same to my Neighbour.

During the time that I considered not the Words of the Angel in the Sepulchre of Christ, saying, *Why seek ye the Living among the Dead?* and therefore search'd about in filthy Sepulchres, in which I could not find the Life. God at length vouchsafed to look upon me with his gratious and mercifull Eyes, and brought me into the right way, insomuch that leaving the Sepulchres and Monuments or Tombs of the Dead, I began to look for Life amongst the Living, and not amongst the Dead.

God onely is the alone and eternal Life, who bestoweth upon us the so much desirable *Sun*, (as being the Servant of God) by the help of the Air. Let us boil, roast, bake, and labour as much, and in what manner soever we please; yet shall we never find any livelinesse, save from the Sun, the Servant, Minister, or instrument of the Omnipotent God. [For, else] we [doe but] prepare us Medicaments destitute of virtues, of fine out-side Colours, but within, dead and full of poison, because from things wanting life, no help can be expected.

Forasmuch therefore, as we gave not life unto our own selves, neither can we defend the same against death without that one onely life coming unto us from above: it is very expedient, that, omitting the stinking dung, we betake our selves to the pure and living fountain of God, as being the Centre of all life; and doe seek for life, from the Sun, as being the great master of all the created Palace [or World.] The way of effecting this, will I reveal unto you in a few words.

If we accurately weigh with the utmost of our discretions this whole business, we clearly see it afore our Eyes, that there is no other life to be any-where found, besides that universal life which God hath implanted in the *Sun*, and which the *Sun* sends down unto us by the help of the Air. Let any one make trial, what way soever it likes him, and he shall find this most true.

If you would putrefie an Herb or Animal in a shut glass, so that the Air cannot penetrate [into it,] there will indeed be Magots generated, but they will want life so long, untill the glass being opened, they receive life and motion from the Air. If you put Herbs, or the Flesh of living Creatures chopt or bruised in a glass, and shut it close, and keep the glass for a while in hot Horse-dung, or else in warm water, there will Vermine [or Maggots] be indeed generated, but yet void of life, which (the glass being opened) will begin to stir of themselves; and so having gotten life, creep out, and become greater, and will get other forms or shapes. Place likewise in a warm place, some little Barrel half full of Wine, and let the bung-hole be open, that it may putrefie and begin to wax sowre; The ascending vapour will gather it self about the said Bung hole into a tenacious matter, which will yield small little vermine [or Mites,] much like those which are engendred in Cheese; and which at length will, by reason of the Air, live and creep forth. If you put a Cover over the hole, all these little Mites will again dye, because they are deprived of the Air from which Life doth proceed. Then the Cover being again taken off, and the Air admitted, they doe agen creep; and following after the Air, endeavour to get out of the Barrel: out of which, if they doe but stay some hours onely, and feel the full Air, they attain to another form, and get wings and fly away, which cannot be done without the Air, seeing that without it they can have no life.

Let such Earth as hath Seeds sown therein be so covered over, as that the Air cannot penetrate into it; which being shut out, nothing will be brought forth: or let it be some Plant, which hath already sprouted up out of the earth; if you doe but take the Air therefrom, it will cease growing and plainly wither and come to nought.

From whence it is clearly evident, that the rise of all Life is to be imputed to the Air, which very Life it self, the Sun hath first wrought in the Air, and Art knows how to extract the same again thereout of, by a certain Magnetical way, and make it visible, palpable, and sensible.

But all the Air is not meer life, but contains this same life dispersed, or dilated in it, like a great deal of water containing in it but little Salt, it self being visible, but the Salt which is therein, invisible. And just so is the life dispersed in the bodies of Men, and other Animals, and, being invisible, hath its habitation in the blood, so that, without it, the whole body would be immovable and remain dead. Now when either a Man, or any other living Creature is conversant in the open Air, he attracteth to himself by his breathing, (by a certain Sympathetical power and property) as much Air as is requisite for the Heart, (which is the Center, Receptacle, or House of the Life) for the nourishment of the spiritual Life, and as for the residue, and unprofitable part, it casts it away by the Antipathetical virtue and property of the out-blowing (breath or) expiration. So that no Man, no Animal, no Herb, no Mineral, can possibly enjoy a living and growing faculty, if this food of Life were withdrawn therefrom. Which seeing it is so, and cannot be otherwise, it doth necessarily follow, that the true universal Medicine cannot be prepared in any shut up (or close) Vessels as is commonly done. Do but look I pray upon the Birth and Generation of Salt-peter, the Body of which is nothing else but the essential Salt of the Vegetables, Animals, or Minerals, which attracteth to it self the Fire out of the Air, as is well known. Therefore, whereas all Salts are wont to be turned (by the help of the Fire and Air) into burning and live Salt-peter, and that no body can bring the same to pass without Air: we should by good right learn from thence thus much, *viz.* to endeavour to make our Medicaments too, alive by the Air. For a Medicine that is destitute of life will subdue and destroy a Disease even just as much as common Salt will overturn a Mountain, and throw it out of its place, without being animated as it were by the Air, and transmuted into burning and living Salt-peter. Truly therefore and by experience do I say, that all the faculty of growth, all Transplantation, and every life owes its birth to the Air, and without it do they all become dead and so remain.

The Air receives [its] vital food from the Sun, and the Sun derives its Original from God, the Center and Beginning of every Life. And therefore when we are desirous of extracting that vital food out of the Air by the help of Art, and of reducing it into a visible body, it is behoovefull and expedient, that we expose thereunto a certain Magnet, which may draw the same unto it self, and be by little and little augmented therewithall, and may grow both in quantity and virtue, even as an Herb out of the Earth; or as an Animal gets it self growth and encrease by meat and drink, and adds to it self an augmentation of strength and greatness, and at length associates it self unto [or couples with] its like, and multiplieth its kind.

Man himself doth without intermission attract to himself the Air, by the help of his Lungs; but the Heart retains onely the vital food thereof, and rejecteth all the rest like so much excrement. The Body it self also doth daily assume food and sustenance by the Mouth, but the Stomach transmits the nutriment that is separated thereout of, to the Liver, to be reduced into blood and flesh: but the Excrements, as the Dung, Urine, Sweat, and the like, it banisheth out of the body by the usual passages. Thus likewise stands the case with our Medicament. According as the Magnet is, that we expose to the said Air, so accordingly doth it attract its like out of the said Air, whereby it may get to it self, Life, Virtue, and Power. But it cannot possibly be, that it should extract that virtue and faculty simply pure and clean; No, but it gets to it self also a certain, unprofitable, and watery Essence, which is associated unto that [virtue,] which acqueity doth again go off, as a superfluous Excrement, and must necessarily bestow the Life onely upon the Magnet, that it may be therewithall encreased and strengthened. If I desire to have a Vegetable, then must I sow a Vegetable Seed; or such a Magnet is to be placed there, as may associate or adjoyn unto it self its like out of the Air. If you would have an Animal, then an Animal Seed, or Animal Magnet is to be used. But if that which I seek is to be more pure, and more constant [or lasting:] a purer Magnet must necessarily be exposed; for like doth always seek its like; love, o'ercome, and conserve it: according to the testimony of the Ancient Wise men, *Nature rejoyceth with Nature: Nature overcomes Nature: Nature retains Nature.*

And therefore seeing our purpose tends to this, namely, to extract the invisible faculty of Life, the power and virtue of the Sun out of the Air; to concentrate it, and make it corporeal, visible, and palpable; It behooves us to provide our selves with a fitting Seed or Magnet, which may earnestly attract, overcome, and hold the same. Now such Magnets are pure Gold, and the most pure Soul of Salt-peter, both of them being the true off-spring of the vivifying Sun.

Because therefore like desires its like, loves, and seeks after it, a poisonous Magnet must not be exposed [to attract] a vital food: For as is the nature of the Magnet, so likewise doth it attract good or evil out of the Air. It is a thing that Husbandmen are well acquainted withall, namely, that Wheat produceth nothing else but Wheat, and from Tares do Tares arise. If the Seed or Magnet be aureous and pure, it will also acquire to it self pure and golden Virtues, and be encreased by them.

The manner of so placing the Magnets, that (by Solutions and Coagulations) they may receive the Astral and vivifying Rays of the Sun, and may render them visible, corporeal, palpable, and durable in the Fire.

YOU must get made some flat and strong glass Dishes or Platters, in which you must put your Magnet the thickness of half a fingers breadth, and expose it moist to the Sun, that the unprofitable humidity may vanish by evaporation. Which done, (and in the Summer-time it will be done in a few hours, especially if there were not too much of the Golden Liquor put into the Dishes) expose the same Dishes, which contain in them the [thus] dried Salt, in the night-time, open to the cold and moist Lunar Beams, that the Salt may by its magnetick virtue associate unto it self from the Air, the Water, which carries in it the universal food of the Air, and consequently may be dissolved. This Solution is to be agen set out in the day-time to the Sun-beams, which will again dry up the unprofitable moisture, and leave in the Salt, that vivifying and golden Seed, which it contracted in the cold Night and Air, together with the humidity, which is void of any virtue. The Salt being freed by the Sun from its superfluous moisture, must be again exposed at Night to the Lunar beams, that it may again imbibe the Astral virtues, and may be agen dissolved in the imbibed water, that, being the next day, as the day afore, exposed to the Sun, it may be animated anew with those same virtues: These exposings by turns [to the *Sun* and *Moon*,] must be so long and so often repeated, untill the said Magnet, (after its being dried at the day-time in the Sun) will, at the night-time, hardly admit of any moisture from the Air, and that being dry and put upon a red-hot Plate, it readily melts without fume. For then may it be applied to use, as being a constant and fix Medicament.

This interchangeable Solution and Coagulation must be repeated some hundreds of times, and every Solution and Coagulation is to be accounted for a Philosophical day.

If now in the Summer-season the heat of the Sun be not strong enough in our Countries for the effecting of this operation, the said heat may be concentred by Glasses, or metallick Instruments, and be made more efficacious, that the Coagulation may be ripened [or hastned.] But in defect of such Instruments, and want of the heat of the Sun, which is frequently over-cast with store of Clouds, you may easily forward the Coagulation with our Common Fire, and that too with a more unfailable and speedier operation than that is, wherein the drying up by the Solar heat is always to be waited for. And although this operation, which is performed in the *Sun*, is to be accounted of as far the better, yet notwithstanding the *Sun* doth operate together with our Common Fire after an invisible manner, when we cannot make use of the *Sun* it self. For wheresoever the Air is, there also is to be found the invisible *Sun*, and the occult virtue and power of life. He that can have the opportunity of using the *Sun* in this operation, needs not any other Fire. But the using of our Common Fire requireth a peculiar Iron Furnace, whereon the Dishes or Basons are to be placed to dry. But yet the heat must not be underneath, and strike at the bottom of the said Basons, but

but it must be such as may strike the heat downwards at top of the matter onely, and may gently and by little and little consume the humidity: For else there would be hazard of the Liquors boiling over, and of being lost, if the heat should be placed under the bottom of the Dishes. The Iron Furnace may be made of Iron Plates, resembling Arched work, [or Oven like] and be placed within a Stone Furnace, and have a Door fitted thereunto, that so neither Dust nor Ashes may fly thereinto, and by this way will the Salts be dried in two or three hours time. And now, that you may not need to wait till the night approacheth, you may have a wooden Box or Chest made, and covered over at the top, but pierced full of holes all round about the sides, which (with the Basons placed therein) may in the Winter-season be set abroad to the cold Air, and in the Summer-time may be placed in some moist Cellar, that so the Salts may attract from the Air the food of Life. For in all places of the World doth the Air contain in it (though in one place more plentifully, and better, than in another) that occult faculty and virtue of Life, without which, neither Men nor Animals are able to live. But by how much purer the Air shall be, so much the purer and more excellent is the acquired Medicine. As for the Transmutation of Metals, it matters not much what Air it is that you get, for every sort of Air is fit for this operation. We doe in this place manifest onely the way of fixing it: Now every one knows that a pure and clean Air is better than a gross and an impure one, and that the heat of the Sun is better than the heat of Coles, or of a Lamp.

Thomas Aquinas writes, that God with his Angels cannot want our fire, and therefore is he reproved by *Paracelsus*, because he saith that God cannot want the Elementary fire. Alas, Good man, he did not so accurately weigh this matter, for this proposition tends onely to this end, namely, to set afore our eyes the purity of the Fire necessary for the Coction of our Medicine. From whence it is sufficiently manifest, that a Medicament will be so much the better, by how much the purer the Fire shall be. For a gross Air begets a gross Blood. But in this operation, the Air is the Meat and Drink of our Golden Salt, but the Water or Phlegm is to be driven away by heat, it being a superfluous Excrement adhering on to that Air. Now in those manifold Solutions and Coagulations, the Magnet doth always retain some good thing, and encreaseth both in weight and virtue, and attaineth a constancy: like as Men and other Animals are encreased with Meat and Drink, and doe grow in stature, and multiply themselves. The whole work therefore of making this kingly Medicament by the help of the secret Solar fire, doth consist in a good, pure, and golden Magnet, and afterwards in a true Solution and Coagulation: Which if it be too speedy and strong, the over-much heat will burn up and consume the attracted food of Life. If therefore a Medium be not used, it so happens, as 'tis wont to be in any Earth that is too moist, and therefore not [capable of] bearing fruit. So that nothing is more necessary than to have a due regard of mediocrity, not onely in the Solution, but in the Coagulation likewise.

And this is that way by which the Solution done in the Air, and the Coagulation made in the Sun, doe reduce the Mercurial water, and the Minerals prepared with Salt into fusile and tinging Stones; which thing the Common fire will never perform in a glass closed up, and without the Air.

Note this, and believe it, and doe it, and thou wilt find what thou hast believed, come to pass.

Supper being ended, and the Drinking-bout over, 'tis time for the Guests to go to Bed, unto whom the custom of some is to present a closing Cup, made of good and profitable Herbs, 'mongst which, such as are more bitter, are for the most part in greatest esteem, because they close up the mouth of the Stomach, and beget a quiet Sleep.

Now to parallel this Custom, I will here set one down, for those that are desirous of such like bitter Potions, and such an one as they may prepare according to their pleasure, and apply to use.

Take of common *Aqua Fortis*, which you must rectifie by a Cucurbit, or by a Retort, that it may be bright and clear. Dissolve therein, by boiling in hot Sand, as much cupellated Silver as it will dissolve; but you are to note here, that there must not be any Copper at all in the Silver, for it would spoil the Medicament. Into the Solution pour strong and well rectified Spirit of *Sal-Armoniack*, so long till the *Aqua Fortis* makes no more Ebullition. When all the tissing and noise is over, there will be about the half part of the Silver precipitated, and settled to the bottom, and will be of an ashy colour. Place the Glass in Sand, put Fire thereunder, and boil the precipitated Silver with the *Menstruum*, in which boiling there will separate yet more Silver out of the *Menstruum*, and the residue will remain dissolved up in the *Menstruum*, which is to be filtered through Cap-paper, and then to be evaporated by little and little in Sand, that all the humidity may be abstracted.

N. B. The *Aqua Fortis* and Spirit of *Sal-Armoniack*, turn into a liquid and volatile Salt, and have lost their corroding property, which Salt hath introverted the Silver, and drawn its bitterness forth, insomuch that both Salts are converted into one bitter and green Salt. This Salt must be dissolved, filtered, and purified by pouring Water thereon, and again drawing it off; and being hereby rendred more pure, it resolves it self in the cold Air into a green and bitter Liquor, one drop of which is able to make a whole Cupfull of Wine bitter. And this Wine being drunk is profitable to the Stomach, causeth quiet Sleep, dissipates Windiness, and keeps the Belly Soluble.

N. B. This Salt guilds over Glasses, and other glazed Vessels with Silver, nor does it vanish away but remains constant. It likewise performs other considerable effects in Alchymy, as may be seen in my other Writings, but especially in the second part of my Furnaces, of the last Edition. And thus do I leave the Guests to their rest, that they may Sleep even till broad Day-light.

The Sun being up, and some of the Guests being very droughty or thirsty with their Yesternight Surfeiting, and being tormented with overmuch Heat; they endeavour to extinguish this Inflammation of the Liver, with cold Fountain Water, or with small Beer, or with hungry and sharpning Wine. Others send to the Apothecaries for some Syrup of Roses, or Violets, and mix that with Fountain Water, and so drink it off. But the burning hot Liver is presently smitten with a sudden horrour, the Stomach is refrigerated, and beset with clammy Humours, and most an end the Limbs are debilitated, the Skin becomes Scabby and cold Feavers possess the Stomach.

Instead

Inſtead therefore of ſuch like drink, I will here ſubſtitute a far better cooling Potion, which ſhall not hinder the health, as thoſe do, but be profitable to the ſame.

Take one pound of Spirit of Salt, not of that yellow, unrectified Spirit that is ſold in the Shops, but of our well rectified Spirit; wherein diſſolve as much Tartar as it will aſſociate unto it ſelf in a gentle boiling; filter the Solution through Cap-paper, that ſo all the Fœces which were in the Tartar, may abide in the Paper, and the Spirit of Salt it ſelf together with the [diſſolved] Tartar may paſs through, bright and clear; if the Solution ſtands long in a cold place, part of the Tartar will ſhoot into Cryſtals, and part thereof will remain mixt with the Spirit of Salt, and give it a gratefull vinous Acidity. If you uſe white Tartar then the ſaid Spirit will remain white, red Tartar tingeth the ſame with the colour of a Ruby. *N. B.* The Spirit of Salt is of ſuch a nature, as that it makes all colours more fair. You may therefore uſe red Tartar to make this Potion withall, becauſe of the lovelineſs of the colour, wherewith it tingeth the Spirit of Salt, for as to the virtues and efficacy of them, there is no difference to be found between them.

This Tartarized Spirit of Salt is very ſweet, and taſts like an acid Wine, ſome drops of which, being drunk in cold Fountain Water, will not at all hurt the Liver: nor will it onely allay the droughtineſs and thirſt, but alſo ſtir up in the Stomach an Appetite to meat and drink. And therefore I do commend this Tartarized Spirit of Salr, beyond all other thirſt-allaying Remedies, and it may be taken ſafely and pleaſantly, both *Summer* and *Winter*, becauſe the unripe and acid Wines being drunk with Fountain Water and Sugar, do refrigerate the Stomach, and load it with tenacious humours, and weaken the Appetite, and hinder digeſtion.

Moſt profitable therefore is this our Spirit unto thoſe, who daily drinking much Ale, may always mix a little of the ſame with their Ale. For it makes the Ale to taſt like an acidiſh Wine, it allays thirſt, ſo that there will not need ſuch a guzling in of ſo great a quantity of thick Ale, it diſcuſſeth Wind, expells Urine, hinders the generation of the Stone in the Bladder and Reins, and if it be already generated it diſſolves and conſumes the ſame, and by little and little drives out the ſame with the Urine. Being adminiſtred to ſuch as are troubled with the Feaver, Gout, Stone, and Scurvy, and that in all their drink, it is a pleaſant and profitable Remedy. Concerning the uſe of which, you may find more ſpoken in my Treatiſe, intituled, *The Conſolation of Sailors.*

Now beſides all this, there is yet one thing more that I ſhall here admoniſh you of; namely, that by the Spirit of Salts help may a Remedy be adminiſtred to many more hurtfull diſorders, but eſpecially in the ſtead of thoſe ſharpiſh Waters, unto which, Men are wont to come from far and undertake long Journeys, loſing their moſt pretious time and Money, neglecting their Calling, their Houſhold Affairs, their Wife and Children, upon the bare hope of recovering their former Health: Whereas notwithſtanding, the Spirit of Salt well prepared with Tartar, and having a little Steel Powder put thereinto, will perform the very ſame effect as the Calibeat Waters are wont to do, and ſo they may avoid the loſs of ſo much expences, and of their pretious time; and thus every one may diſcharge and follow his own Calling and Domeſtick Affairs, and yet for all that, be cured by the help of the Tartarized and Chalibeat Spirit of Salt which openeth the Obſtructions of the Liver and Spleen.

But what ſhall I ſay much for? Some haply there are that go the more willingly to thoſe Waters every year for other reaſons. Such as have old chiding Wives at Home, that take it very ill if their Huſbands do but ſtir out of Doors, and are continually a plaguing them with Scoldings and ill Words, have not theſe think you great reaſon to ſeek ſome Diverſion?

Young Women alſo love to viſit theſe Waters and Baths, who meeting not with ſo much heat in their feeble and aged Husbands, as to beget them with Child, betake themſelves to thoſe Waters and Baths, where at all times they meet with active ſtrong Companions, full of ſtrength and Metal, who without doubt do frequent the ſaid places, for this very end, namely, to apply warm ſuppoſitories to thoſe cold Women, and uterine emplaſters to make them Fruitfull, and to take away Sterility. Such kind of Dames being reſtored to their former health, and returned Home, their Husbands find (after ſome few Months) how effectual the uſe of thoſe Waters have been upon their Wives.

Beſides, it moſt an end happens that the Maſter and Miſtreſs being abſent, the Houſhold Affairs are very awkwardly adminiſtred and managed by the Children, the Men-ſervants, and Maid ſervants; and that common *German* Proverb doth uſually take place; *The Cat being out of the way, The Mice upon the Shelves do play.* The truth of this is ſufficiently teſtified by frequent Examples. And therefore it is much better to drink theſe acid Waters at Home, whereby both Money and Time is ſpared, and many evils prevented. And thus much may ſuffice to have been ſaid concerning a refrigerating Drink.

And now, ſeeing we have at hand good Cheeſe and Butter, good Sawces or Cates, and delicate Drink, can we not be here with content? Verily in my Judgment here's enough diſht out for one Banquet. But ſome may ſay, in very good time! *Glauber* [indeed] does not onely teach us the preparation of good Meats, but likewiſe of Cheeſe, Butter, Sawces, [or Junkets,] and pretious Wine, but yet tells us not from whence the Milk to make the Cheeſe and Butter withall is to be had, nor whence the Sugar and Spices for the Cates, and the Grapes needfull to make the Wine with, are to be gotten? What benefit have we by knowing how to make Cheeſe and Butter, and yet want Cows to yield us Milk? To ſatisfie theſe, we will demonſtrate unto them, that even both the Milk it ſelf, and the precious Spices, and moſt excellent Grapes are all attainable by the help of Salt.

In my Treatiſe called *Miraculum Mundi*, as likewiſe in that called *The continuation of the ſame*, and in that Book, *of the nature of Salts*, I have clearly enough ſhown, that all the faculty of the Growth and Nouriſhment of all growing and movable Creatures doth take its riſe and original out of Salt alone, and that the correction or melioration, not onely of Vegetables and Animals, but even of the Minerals too, is to be ſought for from the ſame.

But foraſmuch as this bettering of the Metals meets with but little credit and is very hardly believed and underſtood, (nay 'tis plainly thought a thing impoſſible to be effected,) I could not chooſe but manifeſt and demonſtrate the truth of the ſame unto the whole World; namely, that like as the Metals

are

are in long process of time maturated by Salt in the Bowels of the Earth: Even so may the same be likewise maturated, mundified, and amended out of the Earth, by Salt, by the help and benefit of Art; not onely by the moist way, but also by the dry, and that with one Fire, in one Furnace, and with one Servant, whom I will in this place call *The Countryman paying his yearly Rent.* When his belly is continually fill'd with Coles, his Plows never cease going, so that weekly, monthly and yearly he is able to pay his master the due hire, namely Gold and Silver, wherewith all things necessary for houshold expences may be gotten.

And although this Countryman, which I will here describe, be not that [great] Country-Farmer, which I have mentioned in the *Third Part of the Prosperity of Germany:* yet notwithstanding he is a little one, and one that will discover so much unto the ignorant as to cause them to believe that the things which I speak of are possible to be done, and that there is a yet richer and better Countryman. But this here is to be accounted as a small Cow, and which will however supply you with Milk, Butter and Cheese, for necessary uses, if not with Sugar, Spices, and Wine too, to be set out upon the Table. If this Country fellow be too little and small for any one, he may even provide himself of a better, and learn by the consideration of this, by what means such Countrymen are to be nourished, that so the Rent may be gotten from him in its due time.

A. *The little Country Tenant with one Plow.* B. *The Countryman with three Plows.* C. *The Countryman's Cap.* D. *His three Plows.* E. *The Registers to govern the Fire by.* F. *The Glass set in with his Alembick and Receiver.* G. *The Door to shut the Crate.* H. *The Ash-hole.* I. *A Basket of Coals.* [See the Fig. before the 3d. p. of *the Prosperity of Germ.* noted with pag 76.]

In the first place you must prepare you some pounds of good Spirit of Salt, after the way which I prescribed with Vitriol, without which it will effect nothing, for out of this [Vitriol] it doth in the preparation carry over with it the spiritual Gold, or ringing Spirit, which said [spiritual Gold] is, in the performing of the operation, fixed, together with that spiritual Gold, which lyes hidden in the inferior Metals, and so becomes manifest.

Then (in the next place) you must build you a Furnace, which is called by the Chymists the *slow Henry*, or *dull Harry*, but I call it *The little Country Farmer* or *yearly Renter:* you may build it, I say, of what bigness you please; or for Example sake, the Tower which holds the Coles may be about Man-heighth, and about one Cubit broad in the inside, but so, that the top part and bottom part be narrower, and the middle part wider. To this Tower you must adjoyn two or three Furnaces, which are here called the Countryman's Plows, and in which the Vessels are to be placed, which hold the Metals that are to be maturated by the Spirit of Salt, and which have a continual heat, whereby the never-ceasing coction is holpen from the Tower that contains the Coles. Now see that you make all things cleverly and well proportioned, whereby that the Fire may be well and commodiously governed, and may be conserved for twenty four hours at least, without any looking too or medling with, as may be seen by the now described Figure.

The Vessel, in which the Spirit of Salt, with the Metal, is to be exercised (or laboured) with a daily Coction, must be made of such matter as doth not flie with the heat of the Fire, nor is not eaten with the sharpness of the Spirit, (but) such as may be seen in my Laboratory, and will for the most part dure and hold the Spirit of Salt a whole year without breaking.

All things being ready and fitted, the Countrymans Belly is to be filled with Coals up to the Neck, and his Head covered with a Cap, that the Fire may not find any out-let, save by the lower holes, through which, the heat may find an entrance into the adjoined Furnaces; and as for the Vessels, they are to be filled with the Spirit of Salt, and with Metals fitted for this Operation, and to be covered with their Alembicks, that the Spirits which ascend in the boiling may be received and conserved. When all the Spirits of the Salt are come over, they are to be again returned back upon the dried matter in the Cucurbit, and are to be agen drawn off by distillation. This operation and cohobation being often repeated, doth ripen and fix the spiritual Silver and Gold, whereby it becomes Corporeal: But yet the Spirit of Salt alone is not able to give Gold, but ripens Silver onely, but by the addition of other Salts, it will give Gold too. And even for the fixation of Silver, common Salt may be also added to the Spirit of Salt, that so the Spirit of the Salt may be made strong in the digestion; yea and in time so very strong, as to fume even in the cold Air, and therefore a little water may be also added besides the Salt

Hence it comes to pass, that in one days digestion six pounds of Spirit of Salt will give seven pounds of the same; unto which, if you again add one pound of Water, and one pound of Salt, you shall have eight pound of Spirit of Salt: which by the addition of another pound of Salt, and one pound of Water more, it may be farther augmented; insomuch that the Spirit of Salt, by a continually-repeated addition of Water and Salt, gets a perpetual encrease, and the Metal is so far from being at all hindred in its maturation, as that it is daily ripened more and more. For the Agent and Patient are continually encreased, and become bettered both in quantity and quality, which verily is a most excellent work, and never so manifestly described by any body as by my self.

But that I may be yet better understood by every one, I will here adjoyn a way which every one may imitate, and which teacheth how, by the Spirit of Salt alone affording not Gold but Silver, the said operation may be instituted with Copper.

You must take care to have a Vessel made either bigger or lesser, of such matter as the Spirit of Salt cannot spoil or prey upon; And pour thereinto as many pounds of the Spirit of Salt as it will well hold, and as many pounds as there be [of Spirit,] so many ounces of Copper-plate must you put in, and to them add twice as many ounces of Salt, so that to one ounce of Copper there may be two ounces of Salt. The Spirit of Salt being drawn off even till the Copper and Salt be dry, it will be stronger and more in quantity, because, from the adjoyned Salt, it hath acquired to it self an encrease and greater Virtues. Pour this Spirit agen upon the Copper, which in the first distillation was wholly dissolved up; and boil the Spirit of Salt over the fire, that the Copper, together with the Salt, which was not carried over by the Spirit in the first distillation, may be again dissolved.

The Furnace being cool'd, Take the glass out of the Sand, and pass the Spirit of Salt with the dissolved Copper through Cap-paper, and wash the white

Calx that remains in the Paper with water, dry it, and melt it with a fix Lixivial Salt, and you ſhall find as much pure Silver, nay, even ſomewhat more than the Copper had in it by its own nature. Put the green filtred Solution agen into the Cucurbit, being firſt well waſh't; of which, if there be ſix pounds, add thereunto one pound of Salt, and half a pound of Water, that ſo there may be ſeven pounds and an half, provided the Cucurbit will contain ſo many pounds, if not, then put the leſs matter therein. Then being placed in Sand, draw off the Spirit of Salt from the added Salt, even to dryneſs, and as much increaſe as you find it have above ſix pounds, lay it by, and add as much water to theſe remaining ſix pounds, which you muſt again put upon the dry matter in the Cucurbit, and then agen diſtill it off till the ſaid matter be dry, and repeat the ſame Operation again by pouring on and diſtilling off. If the Spirit of Salt be augmented in quantity one pound, then put more Salt into the Cucurbit, and agen augment the ſix pounds of Spirit of Salt by the addition of Water, and repeat the pourings on, and drawings off after the aforeſaid manner, always removing at each Diſtillation, the increaſe that is over and above ſix pound: and renewing the appoſition of more Salt, after that the former is drawn off, untill you ſhall have gotten in the fifth, ſixth, ſeventh, eighth, or tenth Diſtillation as much Spirit as you at firſt took, to begin your Diſtillation, [which was ſix pound.] Now all the operation conſiſteth in this knack, namely, that you ſo operate, as that nothing flies away in fume, for all the encreaſe ariſeth from the Salt and Water which you added thereunto. When you have gained thus much, you may (without adding any more new Salt) pour on the Spirit of Salt ſeveral times upon the Salt which is left remaining in the Cucurbit, and agen draw it off ſo often thencefrom, untill it hath brought over with it ſelf almoſt all that Salt. Which [Salt] being almoſt wholly changed by the Spirit of Salt that was poured into the Cucurbit, Diſſolve up the remaining Maſs of the Copper and Salt, and the Sand being cold, take out your Cucurbit, Filter the Spirit through Cap-paper, and waſh the white Powder left in the Paper, and dry it, and melt it as afore with a Lixivial Salt, and you ſhall have as much pure Silver as the Spirit of Salt was able to fix, of the Copper, in ſuch a time. Then put this green Spirit of Salt into the Cucurbit together with more new Salt, and repeat the ſaid labours ten or twelve times, and the Spirit of Salt will be always encreaſed and rendred more ſtrong, and the Copper will agen yield forth Silver.

This Labour, you may at your pleaſure, continue as long as you liſt, for you will always get ſome Silver, and have an encreaſe of Spirit. For both the Agent, *viz.* the Spirit of Salt, and the Patient, *viz.* the Copper doe encreaſe both as to quantity and quality.

But it may be demanded, Whence that Silver comes? That which gave forth it ſelf the firſt time we impute not unto the Spirit of Salt, as if by it made, no! but we ſay that it was in the Copper before, and was melted out of the Oar, together with the Copper, for this may well be. For there's no Copper to be found which does not hold ſome Silver hidden in its belly: and though the Refiners have as accurately ſeparated it as they could, yet nevertheleſs we doe conclude that that firſt Silver ſeparated in the firſt Operation, was what was left of the Oar in the Copper, and remained unſeparated by the Melters [or Refiners] therefrom, and was not made by the Spirit of Salt, but onely ſeparated. And the Spirit of Salt being in its nature an enemy to Silver, does not diſſolve it. But whence then did that come, which offered it ſelf unto us the ſecond, third, and fourth time; whereas in the firſt Solution, all the Silver was clearly taken out, and none at all left therein, but was all of it ſeparated by filtration? What ſhall we here ſay, or indeed how ſhall we dare ſay otherwiſe, but that we believe and confeſs, that the Spirit of Salt did by its operation make the ſame of the Copper. Nor is there any reaſon why this ſhould ſeem ſo very ſtrange unto us, foraſmuch as yearly, in the Earth, all Copper is naturally turned by Salt into Silver, and not onely Copper, but all the other Metals were at firſt, Salts: not ſuch indeed as we uſe about our Cookery in the Kitchins, but ſuch as are impregnated by the Sulphureous Stars [or Conſtellations.]

But foraſmuch as we doe at preſent treat onely of Copper, we doe not therefore meddle with the reſt of the Metals: for very rarely is Copper digged out of the Earth but it hath Vitriol therein, or, in defect of Vitriol, a Sulphur ſalted with a vitriolate Salt. For any ſort of Sulphur being burnt, and its fatneſs flaming, the ſharp Salt is releaſed, and paſſeth away in fume, reſembling the taſt, of the fiery Oil of Vitriol, and is captivated [or caught] in the great Alembick under which the Sulphur is burnt. This ſharp Oil ſupplies the place of an Agent as to the Minera's or Oars, in the Veins of the Earth; and doth more and more ripen the Minerals and Metals, but exceeding ſlowly: for Nature doth ſcarce attain to that limit in a thouſand Years, which Art doth in a few Months time. For there are no impediments to obſtruct the operativeneſs of our Agent, ſuch as are the Stones, Flints, Sands, and various Earths which frequently occur, and are much abounding in the bowels of the [Metallick] Veins: inſomuch that it can diſcharge its Operations freely, and without any Impediment at all: and beſides too, we uſe our external fire by which we help this our Agent, and ſtrengthen its virtues, and keep it in a continual action.

By all this diſcourſe may every one ſee, that when we ſpeak of ripening Silver out of Copper by the Operations of the Spirit of Salt, it is not contrary to nature, but altogether agreeable with the ſame. But now we doe not ſay that any one will ſuddenly bebome rich by this Labour, done with the Spirit of Salt and Copper, but we have deſcribed this Operation in this place, for this end, namely, that hereby the poſſibility of the thing may be learned, and that there may be good ground to believe, that even this too is moſt true, *viz.* when we write that by ſuch or ſuch an Agent, corroborated or fortified with ſuch or ſuch Subjects, and placed in ſuch-like Digeſtions, Gold may be extracted as well as Silver out of the meaner Metals, which how little ſoever there be of, may notwithſtanding prove profitable. For having once made onely ſome pounds of Spirit of Salt, you will not need to make any more anew, for in the digeſtion and maturation of the Metals, it will daily encreaſe, and that in a plentifull manner, and that too without any conſiderable coſts, ſeeing that the Salt it ſelf, which is to be added, is likewiſe cheap enough. If you make your Cucurbit of pure Silver, (for the Spirit of Salt will not work upon that) and digeſt your matters therein, you need not

not then stand in fear of the breaking of Glasses: Besides too, you may always let such a made Vessel lie in the Furnace, and assoon as ever the Spirit is drawn off, you may presently put it on agen, nor is there any need of your waiting so long, and ceasing from the work till the Vessel cool. If therefore a Tower to put the Coals in (as afore) be added to that Furnace, or Furnaces, then is it a true Countrey Farmer, or Tenant, for the sustaining of whom, there will need no other charge but that of Coals, and yet notwithstanding he gives you a perpetual gain without labour, cost, and trouble. Nay more, if we do but rightly weigh the business, we shall find that the daily encrease of the Spirit of Salt in these labours, is easily sold for more Money than the Coals will cost, so that all that Gold and Silver which is gotten out of the Metals, doth offer it self unto us for nothing. Besides, such kind of Metals may be taken for this Operation as are wont to yield more Silver and Gold than Copper, and the plentifulness thereof will be yet more, if several such kinds of Metals are joyned together and so dissolved, and digested, in which operation they better one another by a mutual action; for one supplies what another wants, and likewise from another, are those superfluities which it has in it, taken therefrom: so that (as we said afore) the mutual melioration of those Metals may be set on foot and promoted, as it were without any cost, and by a very little labour.

Whosoever he be therefore that has the knowledge and experience of the nature and property of the Metals, which they are, that have a correspondency with each other, and that love to better each the other; and is not ignorant what Agent is agreeable to Gold; such a one I say as this is, will commit unto his Countrey Tenant the care of Weekly and Monthly paying the due Rent, and will be able by this means to serve God his Creator without wicked Usury; to do good unto his Neighbour, to extricate himself out of that Diabolical Fellowship, of the impious and the great crew of evil Men; and to lead his Life in Tranquillity and Quietude; which verily is a great and singular gift of God, unto any one that can arrive unto such a knowledge.

But yet no Man hath any reason to perswade himself, should he be a Master of this Art and Science [here shewn,] that he shall be able daily to separate great heaps of Gold out of the more imperfect Metals, whereby he may be enabled to lead a vicious Life. No, for my endeavour shall (in the first place) be, not to make any wicked Man partaker of this Art.

And secondly, the whole business consisteth in the blessing of God, as we find it Written, *Paul hath planted, and Apollo Watered, but God hath given his Blessing*: For without this Blessing, all our Labour is but in vain: And this the Prophet *David* doth likewise testifie, saying, *In vain do ye rise up early, and being loaden with many cares, go to Bed late, and eat your Bread with troubles: For unto them whom God is favourable doth he bestow his gifts even while they are Asleep.* Moreover St. *Paul* saith, *It is not of him that wills, nor of him that runs, but of God that sheweth mercy.* And therefore a wicked Man, though he should possess so great a thing, yet would he not do any good upon it, if he wanteth Gods Blessing. Besides, I do not here bring forth my little Countryman upon the Stage, as if he could help any one unto huge Treasures; no, but onely as one that can bestow so much as may suffice, honestly to live. Unless haply a Man should light upon rich Veins and metalline Oars, which should abound with much corporeal Gold, and so by this means should yield great Treasures. Now so much cannot be lookt for, from such Metals as have in them but a spiritual Gold onely, unless the true weight be found, and that there be gotten the knowledge of those Metals which have a great affinity with each other, and which being joined together yield forth Gold. Otherwise you must not expect ought else from this Operation save an honest and moderate profit.

But now, as touching what Metals they are that have such affinity, and what the true proportion of the weight is, no body hath any reason to enquire of me, for I do not as yet profess my self an expert and absolute Artist in this matter, for sometimes I have a very gainfull success of my trials that I make, and sometimes agen I get less.

I was willing therefore to shew the way here, of ripening the meaner Metals by the help of Salt, and that too in a manner without any costs: which way of so doing being by me laid open, may suffice for this time, nor did ever any reveal it before me (I speak it without boasting) or produce it unto publick view in so open a manifestation as I have done.

And now if this separation should be used about the fixed Gold onely which lies hidden in the Oars and Metals, yet mought great profit be thereby gotten in all places; for there is no place in the World in which there are not to be found such Earth, Sand, and Stones as contain in them corporeal Gold, which may be extracted by the afore prescribed way without any costs at all. But here is to be observed that those things which I have written, and clearly demonstrated concerning such separatory Operations in the third part of the Prosperity of *Germany*, are to be agen read over, and well lookt into.

Moreover, this is also to be known, that this maturation if instituted by the dry way, brings more profit than if done by the moist way; for in the dry way the Agent is more holpen than in the moist way, in which there is always plenty of moisture. But however, both ways namely the dry way, and the moist may be done with one and the same Fire, nor will the cost be any more than if the moist way were made use of alone by it self.

For that Tower wherein the Coals are, and which is to keep the Spirit of Salt in perpetual digestion, and to heat the adjoined Furnaces, is always bright hot at the Grate, upon which [grate] if a cementing Vessel filled with Salt and Metals be placed, there will then be even thence as much profit as by an adjoined Furnace, and so by the Fire of one Furnace, and by the self same labour and cost is a double Operation performed, and a continual rent may be expected from the double Countryman.

You must likewise note, that there is a great difference of Salts, and that one Salt is more fit for this labour, and another for that; but by how much greater the Acrimony is, that the Salt abounds withall, so much the more potent an Agent it is: insomuch that it is of great concernment for a Man to know how to concentrate the moist Fire or Agent, concerning which Concentration there is no need of mentioning any thing in this place; forasmuch as I suppose that these things which are at present spoken are sufficient enough.

Moreover I would have the Son of Art know, that the Salt of the *Macrocosm* or of the Ocean, which we have taught the making the Spirit of, is nothing

nothing at all ſo efficacious as that which is gotten out of the *Microcoſm*: For whatſoever things are found to be in the *Microcoſm* or greater World, the ſame are likewiſe in the *Macrocoſm* or leſſer World, namely, Man. But it is not my purpoſe to diſcourſe farther of this thing in this place, but will (God ſo permitting) treat more at large of the ſame, if I come to write ſomewhat of the nature and ſignature of the greater World. For hereby great myſteries may be learned, which omitting to ſpeak more of, I keep cloſe to Salt and ſay, that that Salt which comes out of the Ocean or Sea of Man, or of ſome other Animal, that is, which is voided out of the Bladder, is far more fit for the Tranſmutation of Metals, than that which is gotten out of the Sea, as being the Bladder of the great Animal.

The Ancients have called the World the great Animal, and very rightly, for in its Center it hath a fiery heart by which (as being the great Animal) it moves it ſelf, and conſerves its life, as ſhall be ſpoken of in another place if God ſhall permit, for according to the common Proverb, *Man propoſeth and God diſpoſeth.*

Morien was not ignorant that *Arcana's* of great moment lie hidden in Urine, but hath manifeſtly ſignified it. For when he had prepared the Tincture for King *Calid*, he wrote upon the Veſſel in which it was, theſe words, *He that carries all things with him, needs not any other's help.* And having ſo done, he ſilently betook himſelf unto his Cell. But he had ſaid before unto the King, In thee O King! the Medicine is, by which words, he meant Urine. For out of Man's Urine may a fix Stone be made, which ſhall be manifeſted in other places.

Furthermore this likewiſe is to be here known, that it is a moſt notable and a true experiment and artifice in Alchymy, that is, in the true melting of Salt, when the Agent of Salt, and the Patient, or Metal, are ſo thoroughly conjoined and mixed, as that the Agent is diſperſt throughout the Patient, that ſo the Patient may ſuffer the more, and conſequently that that Patient Metal may be the ſooner ripened and fixed. When a Flock of Sheep being in the Fold, ſee the Woolf coming, they are indeed all terribly affrighted, but are not all bitten and torn, and ſo a part of them feel the hurt and the other part remain free. But if the Woolf ſeizeth upon the Sheep in the open Field, and that the Sheep are ſcattered far and wide ſo that they cannot poſſibly flock together, they will certainly ſuffer more grievouſly.

For Example ſake, when I would meliorate Lead by means of Salt, whether by the moiſt way by Spirit of Salt or by the dry way by dry Salts, if now I cannot radically conjoin the ſaid Salts and Lead together, I do but little to purpoſe, becauſe Lead and Silver, unleſs prepared by ſingular Ingeny and Skill, are not touched upon by Salt and its Spirit, and ſo ſuffering but ſuperficially onely they are able to reſiſt a long time. But being radically united unto Salt by the benefit of Art, ſo as that they cannot be diſtinguiſht from each other, then they ſuffer in all their parts and die, which death is their melioration and life. He that deſires to arrive at this Goal, muſt riſe betimes, and uſe a moſt notable diligence, for ſloathfulneſs hedgeth up the way of coming thereunto: Even I my ſelf am no perfect Artificer, but wait upon the Omnipotent God, expecting what he will pleaſe to beſtow upon me for time to come, and I live content with my preſent enjoyments. Thus likewiſe let another do.

But if now *Saturn* is to be uſed after another way and to ſerve inſtead of Earth to receive and multiply the metallick Seed, there's no need of diſſolving it in Salts, but it will be better to have it onely ſwell or puſt up in them, and keep in ſuch a poſiture as Earth is, conſerving the Seed ſown therein, in a moderate humidity and in the temperate heat of the Sun, which way is alſo a good one and commodious for the production of good metallick Fruits, and that by the help of Salt, as the following Proceſs ſhews, under this title, namely,

The Fire and Azoth *waſh* Laton.

SOME of the Philoſophers have called their Patient *Laton*, and their Agent *Azoth*. But what ſubject that is which they meant by the name of *Laton* there are many Opinions of Authours concerning it, in whoſe Writings may be ſeen, that the greateſt part of them do intend thereby *Saturn*, but yet not the vulgar: and even ſo is it too concerning their *Azoth*, or Vinegar, that being likewiſe diverſly accepted. But be it as it will, yet this is certain, that even in the common *Saturn* do many abſtruſe ſecrets lie hidden, (to ſay nothing of the more myſterious *Saturn*, did we but know how to get it out.)

All Philoſophers do ſuppoſe, that the Heart in *Saturn* is better than that in Gold it ſelf, and for that reaſon do they call Lead a Leaprous Gold, and ſay, that if it could be mundified by a true waſhing, ſome great matter would proceed thereout of. Many Men have very much buſied themſelves about this waſhing, but yet have not attained unto ought elſe, ſave that they have brought the *Saturn* into a white, fugacious, and liquid Body, concerning which labour I have made mention in this Treatiſe of metallick Cates and Sawces, and alſo in the third Part of the Proſperity of *Germany*.

In my judgment, the common *Saturn* is a commodious Earth, for the reception of a metallick Seed, and for bringing the ſame unto multiplicaton; Witneſs *Paracelſus* himſelf who tells us, that *Saturn* may be compared to the Earth, for all ſuch things as it ſeizeth on it makes like it ſelf, and turns them into Earth, *viz.* in the common Fire, for *Paracelſus* here intends that.

But now, if ſome metallick Seed be ſown in *Saturn*, as being a commodious metallick Earth, and that ſuch an Earth and ſuch a Seed be moiſtned with a due metallick Water, and be expoſed to the fruit producing and vivifying Sun, the earth together with the Seed, doth by reaſon of the moiſtning cauſed by the pouring on, or affuſion of the mineral Water, ſwell up, and become porous, and receives and conſerves the Water, ſo that the ripening Sun cannot dry up the Earth, and conſequently burn up the Seed. And by how much the oftner the Earth is moiſtned with the mineral Water, and the Sun expelleth the ſaid humidity, ſo much the ſpeedier doth the Seed ripen, and attain to his maturity.

For like as the Husband-man when he is about to ſow this Corn, chooſeth ſuch a ground, as contains a fat and tenacious mould, which may not be waſht away with the Rain, nor ſuffer the due nouriſhment to be withdrawn from the Seed; for if the Seed be ſown in Sand, a little Rain can eaſily waſh away the Sand and Seed, and impede the faculty of growth,

growth, which in a fat and tenacious Soil is not wont to happen. For the Water or Rain should but onely moisten the Earth, that it may not be too closely compreſt, but become porous and admit of the Rains penetrating unto the Seed: which when so, then is there hopes of the Seeds sprouting, in such a fat Earth which swells up by means of the Water, and of bringing forth its Fruit.

Even just after the same manner are the metallick Seeds to be sown, and ripened; and for Example sake, let us take the vulgar and common *Saturn*, (well mundified) for that Earth, into which we will sow such a Seed as having a great affinity with *Saturn*, loves to be augmented therein, whereby it may bring forth fruit. And like as the Seed of any Animal requires an Animal Matrix, as a Field or Earth to be multiplied in, and hath not any affinity with the common Earth: Even so likewise doth a metallick Seed require a metallick Earth, Matrix, or Ground, wherein it may germinate and be multiplied.

Now this multiplication is on such wise made, as is done in the Animals, by the conjunction of Male and Female, one performing the office of the Agent, and the other of the Patient. So then, we will make some trial in this Process which is here annexed, not for the intent of getting great Treasures thereby, but for the sake of searching into, and getting the knowledge of Nature; we will take the Male in the room of the Seed, and the Female instead of the Ground or Field, and we will try whether or no the Seed will admit of multiplication.

Let us therefore take the common *Saturn* for the Feminine Matrix, and Antimony of the Male-like-seed, which we will sow into its own Matrix, as Husbandmen are wont to do. I do not gain-say but that there are other Seeds, and probably better to be found to be implanted in *Saturn*, than Antimony is: But yet here I content my self with this of Antimony, as having an intention of onely shewing at this present, by what way it may appear that a metallick Seed may be brought to a faculty or possibility of growth in the Saturnine Earth. And upon this account for Demonstrations sake of this Labour, was I willing to use Antimony, it being a masculine Seed of a Saturnine kind. For common *Saturn* is usually accounted for the true first Ens of *Lune*, and Antimony for the true first Ens of *Sol*, and they are in very deed found so to be. For you shall not find any Lead without Silver, nor any Antimony without Gold; so that I strongly perswade my self that from those two, there cannot arise ought else but what is good and profitable, did we but know how legitimately to compound and handle them. And although I do not profess my self to know many things, yet will I simply tell you my opinion, concerning the way which I suppose such a Commixtion and Maturation may be effected by.

A Philosopher saith thus,

By Gold and Silver you will nothing do,
Unless you use their first Ens thereunto.

The first Entities of both these are Lead and Antimony, the latter of which, (*viz.* Antimony,) is not to be admitted in that impure state that we find it in, unto the former, as unto its Bride or Spouse, but must first be washed in a hot and sharp Lixivial Bath, that it may thereby attain to a delicate silvery whiteness, and shine like a Star in the Firmament; which Antimony thus purged, is called by *Paracelsus*, the signed Star.

But yet I would not have any one to think, that I do here mean the common stellate *Regulus* of *Mars*, which would be dissolved in Spirit of Salt, and would separate it self from the Lead, which ought not to be: But that signed Star must be so prepared, as not to admit of being dissolved in Spirit of Salt, for else it will not serve for this Work. It must be so concreted as if it were so many thin Shells (one within another,) and so very hard as to be able to cut Glass, and to strike Fire out of a Flint. This signed Star being so washt, is to be sown into its own Matrix, and by the solar Heat and fruitfull Rain, to be promoted and enforced unto growth.

Take of the thus prepared masculine Seed, or signed Star, [A] parts, and of the feminine kind, [B] parts, melt the signed Star in a pure Crucible, unto which being molten cast the Woman in, which being cast in, there is presently made a sweet Conjunction and Commixtion of them both in that infernal Heat, in which they familiarly couple together.

The Mass being commixt, is to be poured out of the Crucible through wet Brooms into cold water, and is to be reduced into Grains, and so the masculine Seed or Husband will be legitimately and duely mixt with its Earth or Ground, or Wife: which Earth together with the Seed which it contains is to be put into a firm Vessel, which fears not the violent corrosion of the Spirit of Salt, but in such a quantity as that scarcely a tenth part of the Vessel may be filled therewithall: Then must there be put thereon as much mineral Water, namely pure Spirit of Salt, as the Cucurbit can bear, and Fire is to be put thereunder, whereby the Spirit of Salt is to be again drawn off, by which Operation, the Earth together with the included Seed will day by day be refresh-ed, be moistned and swell up, by reason of the Spirit of Salt, no otherwise than as if you should moisten some dry and as it were parched Earth, with Water. For the *Saturn* is not dissolved by the Spirit of Salt, but onely swells up, and becomes foliated, and yet remains whole or entire, nor is it much unlike unto lovely lookt Talk, which shines with a delicate whiteness: and therefore the Philosophers say, sow your Gold in white foliated Earth. Without doubt they meant not common Gold, for then they would not have said, our Gold, but would have simply said onely Gold, had they not intended a peculiar Gold, or first Ens of Gold.

N. B. I cannot by any means omit to give you thus much notice, namely, He that cannot hit upon the manner of preparing the said signed Star, may endeavour the making of common *Saturn* aureous, particularly after this manner, as follows. Extract with Spirit of Salt out of the Oars or Veins and metallick fugacious Earths, the spiritual Gold that lies hidden therein, and extract or draw off this Spirit thus impregnated with Gold from *Saturn*, which Spirit may by this means be all agen had, and be used about new extractions. And as for the Gold which the Spirit extracted, that the *Saturn* hath imbibed, and indues it self thereby with a golden nature; which if you imbue or moisten with many such extractions, that goldenness will, as I may so term it, grow up or increase in each cohobation, and the Spirit of Salt it self will become augmented.

If now the *Saturn* be imbued with a ſufficient Portion of ſpiritual Gold, it muſt be reduced by X, or Alkalies, that ſo the ſpiritual Gold may be made corporeal, which will exhibit it ſelf pure unto you, after that the *Saturn* ſhall be driven away on the Teſt. But yet there is no need of doing this, ſeeing it will be better to granulate the *Saturn*, and by thoſe repeated cohobations to draw off the Spirit of Salt agen, being each time impregnated with that ſpiritual Gold, and ſo by this means will you enrich your *Saturn* with the greater plenty of Gold. And being ſo enriched it muſt be reduced by a fixing X, in my ſecret Crucible, which neither ſuffers any thing to go away in fume, nor to run out; in which reduction the ſpiritual Gold and the fugacious *Saturn* it ſelf are fixed, ſo that both Gold and Silver are found on the Teſt with great profit, this labour requiring no other coſts ſave thoſe of the Fire.

This Operation which ſeparates fugacious and fix Gold out of the Oars and Stones, is far better than that which is made by the Solutions of *Lune* and *Saturn*, deſcribed at large in the third part of the Proſperity of *Germany*. For here, we do not need either *Aq. Fortis* or Vinegar for the Solution of *Saturn* or *Lune*, neither need we the ſame to get the extracted Gold out of the Spirit of Salt, but being free from that labour and coſts, we [onely] draw off from *Saturn*, that Spirit which hath extracted the Gold, which [*Saturn*] attracts and holds the volatile and fix Gold that was in the extraction, inſomuch that there is not requiſite to this labour of drawing off the extractions from *Saturn*, any thing elſe ſave onely Coals and Fire. Add hereunto alſo, the gainfull encreaſe which daily comes in by the addition of Salt and Water, by which the Spirit of Salt is day by day augmented without any coſts.

N. B. When the Spirit of Salt becomes too ſtrong by reaſon of the Salt put thereto, that Water wherewith the Oar is waſht, after the firſt extraction of the Spirit of Salt, [or after it hath firſt been extracted with Spirit of Salt] may be made uſe of [and put thereto] inſtead of common Water. For it is ſomewhat ſouriſh, and hath likewiſe a golden nature.

N. B. Praiſe God, and forget not the Poor, ſeeing thou art ſufficiently informed and taught by what means thou maiſt get great Treaſures.

The things I here write, are not for this end, namely, to teach others how to make great heaps of Gold, but onely to ſhew them a way of attaining to a good Medicament, and withall, of knowing and perceiving by the ſame labour, that the melioration of the Metals is altogether poſſible and certain.

Whoever he be that could attain ſo far as to bring Antimony and Lead, as being the firſt Ens of Gold and Silver, into a certain Diſſolvent, ſo as that the one would not precipitate the other; then at length would he have entrance upon the right way, which leadeth unto great things, like as alſo Gold and Silver being diſſolved in one and the ſame *Menſtruum* gives beginning to things of great moment. I dare affirm therefore, that he that can reduce Gold and Silver, or Antimony and Lead, with Salt, into an agreement, hath opened a moſt ſtrong Gate which leads unto a great Treaſure; for then the Patient muſt ſuffer even unto death, and muſt die, out of whoſe dead Body, new and living Bodies do afterwards come forth.

Although I have often told you in my Writings that Gold has no greater enemy than combuſtible Sulphur, and that nothing is more inimicitious to Silver than Salt, and nothing more diſpleaſing to *Mercury* than a ſtrong *Lixivium*, and that amongſt theſe contraries there is a perpetual Antipathy ſo long, untill they are conſtrained by Art and Skill to become friends and mutually to embrace each other: yet notwithſtanding, this will not be ſo eaſily feſible by every prating Boaſter, and that makes a great noiſe by his lofty vapouring ſpeeches; no, but for the ſake of theſe very Men, are ſuch great *Arcana's* juſtly and deſervedly wrapt up in darkneſs, and indeed 'tis fit they ſhould ſo be.

Moreover if there be required a great ſuffering, 'tis neceſſary that both the Gold and Silver, as being Male and Female, ſhould ſuffer together and not barely the one or the other apart: for hereby this Regeneration will be made ſo much the nobler and the more magnificent. For Example, make a Circle, and cut or divide it with Diameters croſswiſe [or at right Angles through the Center] ſo that the extreams of the Diameters which divide themſelves in the middle or central point of the croſs may touch the Circle, and that of thoſe four extreams [or Semi-diameters] one may touch above, and the other beneath, and the other twain may reach, one to the right ſide, and t'other to the left. Place the Gold in the uppermoſt extream marked with the letter A, and his enemy, namely Sulphur, in the lower extream, which the letter C, demonſtrates. In like manner place Silver on the left ſide of the Gold, at the letter B, and its enemy, *viz.* Salt on the right ſide marked D, and you will ſee how averſly theſe enemies behold each the other. The *Sol* looking about him eſpies his capital enemy, Sulphur, directly oppoſite unto him, and hath *Lune* at his left ſide, and Salt at his right; and very willingly would he enter into friendſhip with *Lune*, and Salt which are joyned at his ſide, if they but would, or indeed could. But he honours not his capital enemy Sulphur, with ſo much as a look. The *Lune* placed by the ſide of the Sun, does not permit the Salt to joyn it ſelf with the Gold. For when the Salt is with the *Sol*, it clearly hinders the *Lune* from aſſociating it ſelf with the ſame. Nor can it poſſibly be that Salt, *Lune* and Gold ſhould enter into a thorough familiarity. Thus too is it with *Lune*, who hath her capital enemy diametrically oppoſite unto her, and very willingly would ſhe enter into friendſhip with both her neighbours, *viz.* *Sol* and Sulphur, if they were not ſuch great enemies (to each other,) and refuſed this familiarity. For if *Lune* aſſociates unto her ſelf the Sun, then Sulphur denies to come into the ſociety. If ſhe admits the Sulphur as her companion then, then *Sol* is excluded, as abominating the friendſhip with his enemy Sulphur. Much leſs therefore can *Lune* be the companion of them both together. *See the Fig. in the Book of Dialog.*

But now if the Gods pleaſe, that theſe four capital enemies, ſhould unite in one ſociable amity, and that wonderfull regenerations ſhould ariſe from this new familiarity, (then) do they command *Vulcan* to heat in the Fire this Circle comprizing thoſe four capital enemies, thus conſtituted in the four aforeſaid extreams, and caſting ſuch hatefull looks upon each other, and yet not knowing how to eſcape out of the Circle, and to preſs them together more and more with his Hammer by little and little, untill all four being driven into one maſs, do come together into one body, which body doth then obtain a power of reconciling all enemies, and of effecting great matters.

By

By this here spoken may any one easily conjecture, what great suffering there is in this Conjunction, and what great streights do afflict these enemies, when each of them must thus against their will enter into friendship with his capital enemy. Verily we find them to be such sufferings as have not their like again, and therefore do they produce to light, such great and such wonderfull regenerations. Now whatsoever it be that is exercised in but a small suffering, the same doth admit of but small emendation.

The greater the suffering, the greater the melioration, so that that affliction which brings with it even death it self, brings with it also so much the more noble and magnificent Regeneration and Resurrection. He that suffers not in this World, shall not have the Crown put upon him after his Resurrection. By how much the greater and more innocent the suffering and affliction of this life is, so much the greater, and fairer a Crown may be expected in the other World.

The Grape is prest so long, till it be rid of all its juice, this juice doth indeed bring a sweet and pleasant delightsomness unto mortal man, but the Grape it self which the juice is prest out of, ceaseth to be a Grape, and perisheth through defect of juice, and passeth into nothing. But unto the noble Vine, hath God given this benefit, that it yearly bears not barely one but many Grapes together: All which being pluckt off, it doth nevertheless produce the following year no fewer, but rather more Grapes; and still remains a blessed and fruitfull Vine, because it is furnisht with roots and fertile Boughs. On the contrary, they that have devoured the good and sweet juice themselves, remain always hungry and thirsty, and that for this reason, because they guzle down the juice too new and fresh, whereby their Bellies swell, and they receive no nutriment therefrom.

This is a thing certain and undoubted, that the bodies of the Metals become by suffering and dying far more excellent and more noble. He therefore that knows that the patient is to be subjected unto its own agent, and doth also understand by what way they are to be conjoined, will never labour in vain, but will reap the wished reward of his pains.

When the agent doth touch onely the superficies of the patient, and penetrates not into its heart or root, there will verily be but a very little good done, save onely this, *viz.* That the Agent being afore rendred aureous, is able to give unto its patient also a golden nature, and to bring the same to an aureous degree, and to bestow upon it the perfection of Gold: but that melioration which is done onely by it self proceeds on very slowly.

As concerning the manner of enduing the Spirit of Salt with an aureous nature, that so it may the sooner render its patient a partaker of golden virtues, we have spoken of that already, and demonstrated it clearly enough; he that does not understand, we cannot help him any other way.

N. B. When the Eagle, the Servant of *Jupiter*, hath with his beak and talons pluckt out the coagulated beams of the Sun out of the Cliffs and Rocks, and brings them unto *Jupiter*, he is so very bountifull, that he sends down the same unto us by the Rain, which is of so much efficacy, as that all the Herbs upon which it falls are bettered, and the martial, venereal, saturnine, *Lunar* and mercurial Herbs do put on the golden nature of the Sun; so efficacious is the golden Rain of *Jupiter*, if the Eagle hath first brought unto him the coagulated rays of the Sun.

And that I may be the better understood, and that it may be known, that the Melioration of Metals may be accomplished by a dry Agent, full as well, yea and better, and more profitably than by a moist Agent; I have judged it a thing worth while to adjoyn the following Process under the Title of *the Great Country Farmer.*

And let the studious Artist know, that the amending of the Metals by the dry way, by the operation of dry Salt, is far more easie, and may likewise be dispatcht in a greater quantity, than is wont to be done by the moist way: and that there is nothing required to this operation save Salt and Coals, be the Metals that are to be fixed, even what they will.

For Example, if a man be desirous to fix *Saturn*, or to procure unto it a Silvery nature, there needs not pure Lead be taken for this work, seeing he may have the Oar or Vein thereof for much less price; and indeed there is some that is a wild and sulphureous Oar, which yields not, in the melting, any good Lead, and may be had in great plenty in some places of *Germany* that I know of, for a very small price, or rather for none at all. Such a wild Oar of Lead as this is, which yields neither good Lead, nor is fit for the Potters to glaze their Pots withall, by reason of its hard fusion, doe I chuse for my operation, not onely because it costs less than other such Oars of Lead doe, but for this reason too, because it hath store of Sulphur, and fit enough for fixation.

This Vein or Oar doe I bring into small Powder, and mix as much Salt thereto as need requires, then cast it in upon the Coals, in such a Furnace as I have described to make store of Spirit of Salt in: The Salt and the Sulphur exercising their vehement or powerfull virtues upon the Lead, causeth it to be afflicted with terrible dolours, insomuch that part thereof ascendeth on high [or sublimeth] with part of the Salt, and betakes it self into Receivers fitted on for that purpose. In which sublimation, the Salt and the Lead ascend in a spiritual manner, and contrary to their will, suffer spiritually, and so are constrained to enter into friendship, finding a place of quietude in those cold Receivers, and there setling together. The residue of the Oar, and part of the Salt being burnt up, and emitting no more flores, but falling down through the Grate like Ashes, more new or fresh Coals must be put into the Furnace, and new matter must be thrown thereupon, as afore; and this Labour is to be continued so long, as it shall please any one to follow it. Now by this, the *Saturn* is far more vehemently afflicted, than in the moist way by the Spirit of Salt; And if unto the Oven [or Receiver] receiving the fume, and in which the flowers of the Salt and Lead settle, there shall be applied yet several Receivers, there will then be therein caught store of Spirit of Salt, which being rectified, may be agen made use of in the moist way. The flowers being taken out of the Oven or Receiver into which the fume goes, are to be agen thrown in upon the live Coals in the Furnace, that they may suffer anew and be sublimed. After that they are all sublimed again on this wise, they are to be agen taken out of the Oven, and be cast in upon the live Coals; and must be afflicted with these Labours so often repeated, untill they become fix and ascend no more, but fall down into the Ashes. Which being washt, will yield a Salt profitable for many things, and will quit all the costs which have been laid out upon

upon Lead, Salt, and Coals; ſo that the Spirit of Salt which is gotten, and that which is amended in the Lead Oar by the Salt, coſt nothing. The Aſhes being waſht are to be reduced, in a Furnace, by blaſt, and be ſo often tormented, till a good portion of Silver be gotten by this operation, which the elaborated matter, being purged by a due ſeparation upon the Teſts, will give. And ſo ſhall you have Gold and Silver by the benefit of this operation, by which [operation] we have manifeſted unto you the *Great Country Farmer paying his yearly Rent.*

Now like as *Saturn* is dealt withall in this operation, even ſo are the other Metals wont to be handled too; but yet you muſt obſerve the Regiment of the fire, which, according to the diverſity of the Metals, muſt alſo be diverſly adminiſtred. And even the Commixtion it ſelf requires good heeding, as being a buſineſs of no ſmall moment.

Moreover, in this operation you muſt alſo note, That one Salt is more fit for this operation than another is; for by how the ſharper nature they have, ſo much the more commodious and profitable doe they ſhew themſelves to be. So Common Salt ſublimed, as is done in this Labour, will operate far ſtronger than Common Salt it ſelf unſublimed. Beſides, there are Salts to be found which work yet far more powerfully, yea ſo ſtrongly, as that they need not the help of an external fire, but doe produce their effects even in the cold. The operation of which, in the moiſt way, if any be deſirous to promote and ſtrengthen by an external fire, he may ſo doe, in a Lamp-Furnace, and free himſelf of the charge of Coals, and be exempt from that frequent Labour by which the Fire is to be maintained.

Some moiſt Fires are of ſuch great virtues, as that they need not any Lamp-fire, but a ſmall golden thread or wire in burning Spirit of Wine is capable of adminiſtring heat ſufficient.

And the burning Spirit, if made of Leaves, Graſs, rotten Fruit, or Corn, and Grape-ſtones or husks will be but of ſmall coſts, or in a manner none at all. Now a pound of ſuch Spirit being placed with a Golden wiek in a convenient Lamp will ſuffice for three or four days, and give heat enough. But yet nevertheleſs, that moiſt fire doth ripen its Metal without the help of any external fire at all, and yields its profit, but then it requires a longer ſpace of time.

Put caſe therefore, that I make my moiſt fire ſo ſtrong as to be able to perform its office in the cold, and that it needs not any external fire: And if I were to make a fire, it would needs require one Ducket's charge: If now, ſtanding any-where, it yields me two Golden Duckets out of the maturated Metal, it would doe well enough, and abundantly recompence the labour and coſts expended. For there's nothing wanting of the Metal [you took to ripen] ſave that which is changed into Gold and Silver.

And foraſmuch as I can ſet by many ſuch Veſſels, and thoſe great ones too, there's no doubt to be made, but that my gain will be the greater, and that with very little labour. For now, at firſt, the labour of preparing the moiſt fire, is in a manner no labour at all, for in three or four days may be ſo much made as is ſufficient for the maturating of a great deal of Metal. For this fire may be compared to a Seed, which being ſown in the Earth afore Winter, doth in the Summer-ſeaſon produce ſtore of Fruit, and fit to be reaped.

And though this maturation proceeds on exceeding ſlowly, and excludes all haſt, yet it brings with it this benefit, namely, that it requireth no other labour in the Winter-time, but to be onely once laid by, and the perfecting thereof muſt be committed to God and Time.

There are various and divers ſuch cold Fires, that promote the maturation of the Metals, and may be gotten out of divers Subjects, namely, out of Tartar, Urine, Hairs of Animals, Horns, Calx-vive, Soot, the Blood of Animals, the Feathers of Birds, the Bones of Horſes, Oxen, and other Beaſts, out of which ſuch a fire is very difficultly prepared, one of them, here reckoned up, excepted, out of which the ſaid fire may by an eaſie labour and buſineſs be made, and without coſts. It is therefore a great gift of God, and an eſpecial grace from our Creator, if he maketh us poſſeſſors of ſuch a Country Farmer, which being ſuſtained without any coſts, doth notwithſtanding very largely pay his yearly Rent. To God therefore are unceſſant thanks to be returned for ſo great a benefit.

But we have ſaid enough of theſe moiſt and dry Metal-ripening Fires; what way ſoever any one is minded to chuſe, that way may he follow, for it lyes in his own free choice. If he chance to err, let him not lay the blame upon me, who out of a good mind have undertaken theſe labours of writing, but cannot thruſt the chewed meat into any ones mouth. I will by God's permiſſion ſhow the wonders of God to ſome friends this next Summer, that ſo ſuch as come after us may likewiſe have occaſion of praiſing God, and of giving him thanks.

But even as the common Earth, when it is moiſtned with often ſhowers, and now and then freed of them by the heat of the Sun, retains in it ſelf a fruitfull Salt, and doth neceſſarily acquire a fertility: So likewiſe our Earth doth not onely daily encreaſe in goodneſs, but in weight too, and becomes more ponderous: but you muſt not think that this heavineſs or weight proceeds from the Spirit of Salt's inſinuating it ſelf into the porous Earth, no: For if the ſaid Maſs ſhould be but onely eight days time in the digeſtion, and the Spirit of Salt be [then] waſht off, yet would it be encreaſed a quarter part; which ponderoſity comes indeed from the Spirit of Salt, out of which the *Saturn* draws ſomething unto it ſelf for nutritious ſake, as the Common Earth does out of the ſhowres of Rain, and becomes more weighty.

For if there were no occult and nitrous virtue in the Rain, it would conduce but little to fertility; and if there were no ſpiritual and aſtral Gold, or ſpiritual and aſtral Sun in Salt, the immature Metals could not be ripened by the ſame. By how much the oftner therefore, a good Spirit of Salt is drawn off from the *Saturnine* Earth, and *Saturnine* Seed, ſo much the ſooner alſo doth that Seed arrive unto its full ripeneſs. For at every turn [of drawing off] ſomething of the good part of the Spirit of Salt remains behind, attracted by the Earth and Seed, from which the melioration and augmentation doe ariſe: as may be ſeen in the Vegetable Seeds which ſprout forth out of the Earth, and are encreaſed by the help of Rain.

The poſſibility of theſe things I have ſeen, but have not hitherto brought the ſaid matters to a full maturity, or to ſpeak more rightly, I have not finiſhed the whole operation. He that is minded to make a thorough trial, may ſo doe: and if he miſſeth the effect of his endeavours, let him not blame me, for I doe not aim at drilling on any one by my perſwaſions,

sions, to bestow his charges on an uncertain thing. But I mention these things that so the nature of Metals as also of Salts may be known, and that (by the help of this knowledge) the Writings of the Philosophers may be the better understood. For the labour here proposed avoucheth the truth of those Operations which the Philosophers call their Calcination, Dealbation, Incineration, Ascention, Descention, Cohobation, Inceration, Distillation, Sublimation, Volatilization, Maturation, Fixation, and say that all these and the like Chymical Operations may be made in one Vessel, with one Fire, in one Furnace, without any change of the Labours, Vessels, or Fire.

For the Philosophers have described their greatest secrets and *Arcana's* parabolically, and in Riddles, but especially the Poets, as *Ovid*, *Virgil*, and many others, who are very hard to be understood by those that have not the knowledge of the nature of Metals, which being once known and understood, renders the meaning of the Poets easie. For the Poets were wont to impose one while such a name upon such a Metal, another time another name upon another Metal, which custom of theirs, he that does not heedfully mark will easily fall into an errour, and miss the apprehension of their meaning.

For Example, in one place they call Copper *Venus*, in another, the Wife of *Mars*, in another, the Sister and Wife of *Jupiter*. And so deal they with Silver too, one while they call it *Lune*, by and by *Diana* or *Jana*, another time *Vesta*. *Apollo* is by them stiled one while *Sol*, then *Phœbus*, then *Latons*, so that it is exceeding necessary, for those that are desirous to learn ought out of their Writings, to be well acquainted with those different names and Appellations. And although the Poets do account all the Metals for the Sons of *Saturn*, yet do they sub-distinguish them and stile them, *Saturn*, *Jupiter*, *Venus*, &c.

The common Lead is *Saturn*, and so is Antimony, *Saturn*, *Bismute*, *Tutia*, *Lapis Calaminaris*, the Ashy Colour, Yellow, White, and red *Magnesia* are termed by the name of *Saturn*: The white *Marcasite* and *Zink* are deemed to be of the Family or Pedegree of *Jupiter*: *Orichalcum* or white and red Copper, are stiled by the name of *Venus*. But according as *Venus* is impregnated, and according as the Copper is white or red, so hath it its name. The red Copper is as yet a Virgin. Forasmuch therefore as the Poets have committed unto Writing the Transmutation of the Metals under the Cover, and vail of Fables, and have made mention of *Saturn*, *Jupiter*, *Mars* and *Venus*; it can never possibly be, that he who knows not this different distinction can understand their meaning. And for an Example hereof, consider but the Fable of *Diana* and *Apollo*, brought forth at one Birth by *Latona*, who was gotten with Child by lying with *Jupiter*, and was driven into exile by jealous *Juno*, and having a long time suffered Persecution by the biting Serpent *Python*, and being driven to flye through all the Countries of the World, did at last after many grievous labours and troubles pass over the tempestuous Sea into the Island *Ortygia*, and betook her self to her Sister *Asteria*, by whom she was received, and begat these Twins, *viz.* *Diana* and *Apollo*.

Who will be able to apprehend the meaning of this Fable, save he that well understands the nature of the Metals? Verily no body will so much as dream of or smell out ought of those Mysteries, unless he shall meet with such like Histories in his metalline labours, and then at length will he understand what the meaning of the Philosophers is. But for Example sake, let us take two Metals which have an affinity with each other, namely *Jupiter* and *Venus*, these I joyn together, that so the Woman may be impregnated with the masculine Seed. *Latona* therefore being great with Child, I cast her forth into exile, that she may be continually persecuted by the biting Serpent *Python*, untill she flies through the Salt and stormy Sea, into the Island *Ortygia*, to her Sister *Asteria*, dwelling in the Island *Ortygia*, and there bring forth the fair *Diana* and *Apollo*. Now these things are easily understood, were but the genuine Appellations substituted in the room of such strange terms, of which thing I have onely some knowledge, but do not profess my self a perfect Interpreter. Yet methinks I cannot choose but say somewhat. The venemous Serpent *Python* is a sirname of *Appollo*, for he is produced by the efficacy of the Sun, and is that corrosive Salt which doth so long afflict and torment the impregnated *Latona* all over the dry part of the World, untill she betakes her self by the Sea, that is, by that strong Salt Water, unto her Sister, that is, unto pure *Venus*, and precipitates her self, and brings forth the fruits of *Jupiter*, namely, *Diana* and *Apollo* together. The Poet doth here mind both the moist and the dry way together, when the Metal is wrought with a due Cement, and made fix it is [then] dissolved with the Salt Water of the Sea, and pure Plates of *Venus* are put into it thus dissolved, that so the pure Metal may draw unto it self her impregnated Sister, who brings together with her Gold and Silver, which having been so long hidden in its body doth now manifest it self.

It is indeed the better to fix the Metals by Cements, and so to render their fugacious Gold and Silver compact, which may be as well done in the moist way by sharp Waters and moist Fires. But if the Metals, legitimately impregnated, do first pass through a dry and burning hot Fire, and are afterwards yet once more transmitted through the moist and cold Fires, then *Pluto* sends the mundified Soul out of *Purgatory* unto *Neptune*, by whom it is carried into Paradise, where it doth afterwards remain safe and free from all danger of the Serpent.

Upon occasion of the aforesaid Fable, and particular Transmutation of the inferiour Metals, this is to be yet more observed, that every *Jupiter* is not fit to impregnate *Latona*, but that onely which is yet living, efficacious, young, and full of Seed is able to impregnate *Latona*. For *Latona* carried with her no more but the Seed onely of *Jupiter* into the Island *Ortygia*, and left behind her all the body of *Jupiter*.

Moreover this is to be considered, that *Latona* did bring forth *Diana* first, in the Bosom or Lap of *Venus*, that is, of the Midwife, but *Diana*, presently after she was Born, performed the office of a Midwife in receiving her Brother *Apollo* in her Lap, which thing is sufficiently manifest unto those who have laboured (though but little) in the Metals. For should the Nativity of *Apollo* have preceeded, *Venus* could not have received him, for which reason *Diana* ought to come forth first, that so she might the more commodiously receive *Apollo* from *Latona*. I know not how by any means it may be proposed more clearly.

Every one that does but know the nature of the Metals doth well understand, that when Gold and Silver are spiritually dissolved in one Water, and that plates [of *Mars* probably] are put in to the Solution of the Gold and Silver, neither of those Metals will adhere to the Plates. But if the Plates of Copper are put into that Bath, he shall presently see that all the Silver that was in the Water will adjoyn it self thereunto. And now, after that the Silver is thus precipitated and sticks on to the Copper, the Gold will likewise fall down out of the Solution, and apply it self to the Silver; which labour I have more at large handled in the third part of the Prosperity of *Germany*. It could not therefore otherwise be, but that *Latona* must first bring forth *Diana*, and *Apollo* afterwards, seeing that *Venus* the Sister of *Latona* could be helpfull onely in the bringing forth of *Diana*. It was therefore necessary that *Diana* her self should be an assistant in the Birth of her Brother *Apollo*, for otherwise he could not have been Born.

My time admits not of producing any more such similitudes in this place. We will defer them till some other time, namely, for the Edition of the Work of *Saturn*, wherein shall be taught how the most vile, and most abject Metals are to be maturated by the benefit of Salts, whereby they may in a particular way yield forth Gold and Silver.

But forasmuch as I cannot divine, what impediments may put a stop to the edition of the work of *Saturn*, and that in this very Treatise here is often mention made of *Saturn*. It cannot I think be any ways hurtfull, if some good thing be yet farther adjoyned. And such things as are here manifested of *Saturn*, it will not be needfull agen to mention them in other places, seeing there doth yet still remain matter enough for to fill a whole Book of the Secrets of *Saturn*. And there lie such wonderfull Secrets under the vile and dirty Garment of *Saturn*, as being manifested, would exeeed all the belief of unskilfull Men. For he is not onely an expert Fisher in Fishing Pearls out of the Salt Sea, but is withall an expert Hunter, in driving the Wild Beast out of his green Grove or Cops, and of catching him in his Nets, as we have told you in the foregoing third part of the Prosperity of *Germany*.

Nay, he is a bathing Gentleman of singular skill, who by his bathing and washing his Children, adorneth them with the comelines of *Diana* and *Apollo*. When he is alone, he serves onely for *Apollo* and *Diana* to wash off their accidental impurities and defilements, that so they may recover their natural fairnes. The other Metals can't brook his so over sharp and rigid bathing, but are rather suffocated and killed therein, than become more fair and more pure. But if *Saturn* shall have first washt himself even unto the highest whitenes, in a Bath of common Salt, he is not then so austere and severe, but prepares for his Children a far more tolerable Bath, which being agreeable [or proportionable] to their Weaknes and Sickness, renders them all fairer and more pure. His greatest virtue consists in his Water which doth both particularly and universally free the Metals of all their defilements. I have often had a particular experience [hereof,] and yet daily can (God be praised) shew and teach the same unto others. But I cannot do any such thing in an universal way, and inform others as to that; nor do I vainly brag of so great a matter, though I have my thoughts as touching the manner how this thing may be effected. Nay the more I conceived about that matter, the lesser would I boast of the same.

Verily it is a great shame to boast of that thing, of which thou hast not even the smallest knowledge, or at least dost not know any thing else, but what thou hast drawn in, by the reading of other Writers. 'Tis a common proverb, *That those Cows which Bellow, or Low overmuch, are said to yield the least Milk*, and that this is a thing true, yea most true, experience it self doth testifie.

The Chymical Art is become at present so common, that almost every body, after he hath but viewed over one or two Chymical Books, (though he never moved his hands to the Work, nor understands so much as the Chymical Terms themselves) is nevertheless wont impudently and lyingly to boast of the knowledge of the universal Medicine. Nay thou shalt see some to proceed on to that heighth of boldnes, as even to write Books of so great a Secret, and to dare promise the Revelation of the same unto others, and yet for all this know nothing at all, and have not so much as any the meanest foundation, but rely solely upon that knowledge, which (being as we said afore, drawn out of other Writers) causeth in them a most uncertain hope, of a thing most extreamly obscure.

He that is not a stranger unto, nor ignorant of metallick affairs, can easily discern the Lyers from the true Writers, and can judge who are true, and who false. Such as do know somewhat are not wont to make a bragging noise of their skill. On the contrary, those Brethren of Ignorance do offer unto every one that most secret miracle of Art and Nature, namely, the universal Medicine, which thing a true Philosopher neither ever did, nor ever will do. But as for the revealing of the particular washings, purgations, and meliorations of the Metals, whereby Gold and Silver are to be extracted, if any one doth know these things and discloseth them, and desires not to bury his Talent in the Earth, he does well.

Neither would any one be endammaged by such a discovery though those particular *Arcana's* should be known even unto all Men, and that every body could effect such Operations; for nothing could redound from them but great gain throughout all the World.

But these things here mentioned may sufficiently serve for an evident and manifest admonition for every one to beware of the Books of such Writers, (but why do I say Writers? they are rather Collectors and Describers, who after the manner of Botchers do patch up new Books out of old cast Garments) and to give no credit at all unto them as containing nothing of truth in them, and to think that those kind of Men betake themselves to this Book-patching Trade, meerly to get their Bread by.

Some such Men have I known, that provide not either for their Food or Rayment any other way, than by the sale of such false Philosophical Books, which they have from the Printers to sell to others, receiving a certain price for their labour, which they bestow in profering them to Sale. O miserable Philosopher! Who doth not know so much as to get his Food at Home in his own House, but is constrained to shift after it by the bare selling of such kind of Books. Let this here spoken be as a warning. If need required, and occasion were, I would not fear to divulge their names too; who having not any the least knowledge of nature, do nevertheless dare to offer the Revelation and Confection

of

of the great universal unto others, and cast such a great blemish of reproach upon the most noble Chymical Art, as makes it much contemned, whereas a more noble and more excellent Art cannot be found. I'le not censure any, but yet it would become the magistrate to examine those great Philosophers, whether or no they were actually and in very deed skill'd in that great universal, (which they boast so wonderfully of, and write Books of such great moment, and promise to teach others too, as if they excelled even *Hermes* himself in the knowledge of the Art) and if in the proof or tryal they gave good satisfaction, and confirmed the truth of their Writings by a real and true melioration of the Metals, then to honour, defend, and protect them, as rare and singular Philosophers. But if they know nothing nor could perform ought of their pretended Art, the magistrates would not do unjustly if they punished such men, and made them exemplary, seeing too that they endeavour to asperse and backbite other honest men, who are endued with the skill and knowledge of such great things, with lying reproaches. A good Gardener being wont to gather good Honey out of the Bee hive which he has in his Garden, if he finds a Nest of Wasps or Hornets any where near, built in some hollow Tree, and that they steal away the Honey from his Bees, he right worthily destroys such a Nest, and roots out of his Garden those Thieves and Robbers of his Honey, that so for the future they may not detriment them any more.

Were but one or two of those Fellows handled in such a manner the rest would be deterred and would not so easily promise others by their deceitfull Writings, the making of the Philosophers Stone, which they are so extreamly ignorant of. Certain it is therefore, that no true Philosopher, were he a partaker of the great universal, will indifferently offer the same unto all Men, and calumniate (without any cause given) those that are so innocent (and who have forgotten more than others have learned) and publickly bespatter them with most false Lyes before the whole World, to the great detriment of the Persons so abused.

But to return to my purpose, and to shew in this place yet another very considerable *Arcanum* of *Saturn*, you must know, that I have already published divers great secrets in this fourth and third preceeding part, but cursorily onely, because I have not as yet attained to the one half part of their most great utility, and I was willing onely to shew what things mought be done.

But forasmuch as I have fortified their use with good and sharp Weapons, and that one or other sometime lighting thereupon by chance, and reaping great profit therefrom, may possibly judge that he is no ways at all bound or beholding unto me for the same; I was willing for the better information, and instruction sake, to adjoyn these few things, which are very weighty and considerable.

In divers places of the foregoing third part, and of this fourth part too, I have the preparation of the *Mercury* of *Saturn* and *Lune*, that is, I have shewn how *Saturn* and *Lune* may be reduced out of their Solutions, by the help of Salt, into a Snow like, fusile, fugacious, pure and dry Water; which Waters are by me called the *Mercuries* of *Saturn* and *Lune*, by reason of their fusile and volatile nature: They are metallick Waters not wetting the hands, and yet by reason of their form do they bear the name of Water, because being put into a Crucible, and molten with a small Fire, they are pellucid and transparent like unto Fountain Water, insomuch that they may be seen through even to the very bottom: But yet the Water of *Saturn* is of a more transparent clarity than the Water of *Lune* is.

But forasmuch as our main scope in this place is to make some mention of the use of the Saturnine Water, we will let pass other matters, and declare some of the virtues of the said wonderfull Water in the melioration of the Metals.

Let the lover of Art therefore know, that the Saturnine Water doth display its virtues in washing the Metals that are to be amended. For if any imperfect Metal, as Iron, or Tin, or Copper, be adjoyned thereunto, and held in such a Vessel, as in which, that Water cannot by means of its fugaciousness vanish away, nor through its subtile and penetrating power run out, and that it be digested for a while in such a Vessel, this Saturnine Bath seizeth upon, washeth, and purgeth the Metal, and transmuteth it into a better and more pure Metal, but yet with no great profit, for it onely shews the possibility.

But yet if some tinging Species be adjoyned thereunto, it does not onely make a pure washing, but likewise exalteth and tingeth the same, according as the tendency of the adjoyned subject is, either unto a white or a red Tincture. But what those Species are, there's no need of discloſing them to every one. 'Tis sufficient that I have laid open the Water, and the use thereof in the washing of the Metals.

But that the Saturnine Bath may the sooner and readier seize upon the Metals, and wash them, it is the best way, to add one third part of the Mercurial Water of *Lune*, to the Mercurial Water of *Saturn*: which Waters do very readily conjoyn, and each help the other in the washing, and do also tinge, according as the property of that Tincture is, which is adjoyned thereunto. I will for Example sake adjoyn the manner, which shall both shew the possibility of the thing, and administer occasion of farther search.

Dissolve one ounce of pure Silver in *Aq. Fortis*, and three ounces of common Lead, in more *Aq. Fortis*, mix both the Solutions together, and precipitate them, either with common Salt Water, or with Spirit of Salt, which is all a case. Pour off the *Aq. Fortis* from the *Coagulum*, after its being settled to the bottom, which said *Coagulum*, you need not wash with Rain Water, for this Work, but press the liquor onely through a thick Cloath and so free it of its humidity; this done, dry this metallick Cheese by the Fire, and you shall have a Bath very fit to wash *Venus*, *Mars*, and *Jupiter*. And now when you are minded to try whether or no the success will fadge well, divide your Bath into three parts, and wash those three Metals on the following manner.

N. B. Let no Body take it in evil part, that I here silently pass over my secret bathing Laver, serving to wash the Metals in, and not permitting the Water it self to go away in fume: He that is minded to try this Operation, may for the first time make use of Crucibles, which, although they may bring some loss by letting go part of the Saturnine Bath, yet notwithstanding they will demonstrate the success of the business, and the loss by them caused may afterwards be prevented by due *Mediums*. The manner of using the Bath aforesaid, is as followeth. Take

Take of the filings of pure Iron, Copper or Tin one part, mix it with three parts of our dry Bath, and put the matter thus mixt into an earthen Veſſel, which hath the compactneſs of Glaſs, ſuch as thoſe are, which are made at *Siburg* near *Colen*, at *Bamberg* in *Franconia*, and at *Waldenburg*, near *Caſſela* in *Haſſia*, and in other places of *Germany*. (*N. B.* The common Veſſels and Crucibles cannot retain this Water, but it penetrates through them like Oil.) Heat your Veſſel ſo hot as to cauſe the Water together with the Metals to melt and flow well, in which liquefaction, part indeed of the water will paſs away in fume, but this loſs may be eaſily prevented.

When therefore your Metal hath been thus boild for about one quarter of an hour, part of the ſame will be found waſht and turned into good Silver: nor muſt you thus underſtand me as if the Silver in the ſaid Water were onely precipitated by the Metal, and that no part of the Metal it ſelf underwent any Tranſmutation. For albeit that that Silver which was added to the Saturnine Water be precipitated by the adjoyned Metal, and returns into its former Body, yet nevertheleſs there is more Silver gotten than was added to the Water. For that Saturnine Bath while it is occcupied about the diſſolution of the Metal, doth by the efficacy and Operation of the adjoyned *Lune*, exalt and tinge part of the Metal to an higher degree.

But although this labour does not promiſe any golden Mountains, it is here put for this end onely, namely, that the poſſibility of the thing may be learned hereby: yet notwithſtanding, if any one did but know how to adjoyn to this Saturnine Water, a golden Ferment, inſtead of a ſilvery one, it could not otherwiſe be but that he would get no contemptible gain and profit: yet if the ſame Operation be ſo inſtituted with a white Ferment, as that not any the leaſt part thereof may go away in fume, and be loſt of the Bath, it will bring no loſs. *N. B.* Neither is it always needfull that the Ferments of pure Metals be adjoyned to this Saturnine Bath, for I think that apt Minerals may be found, which may be adhibited in the room of aureous and argenteous Ferments. Nay more, I do likewiſe think that ſuch ſubjects may be adjoyned to this Saturnine Mercurial Water, as may be therein fixed into white and red Tinctures; the thing it ſelf I have not as yet tried, nor do I profeſs my ſelf ſo great a Maſter, for I propoſe to my ſelf this onely end in my Writing, namely, to ſhew unto ſuch as are deſirous after tranſmutations, the way of arriving unto the truth it ſelf. For it will be far eaſier for every one that ſearcheth into the buſineſs more thoroughly, and that maketh more accurate tryals, to find out far greater things, yea much more than he could ever believe. More ſuch Woman-like Waſhings, and more Boys Plays ſhall (God willing) be manifeſted in my Work of *Saturn*.

But now this Saturnine dry Bath may be prepared much eaſier, on this wiſe following; chooſe you out ſuch an Oar or *Minera* of Lead, which is very pure and clean, and hath not either Iron, or Copper, or any other Metal admixt therewithall: (*N. B.* If Silver be likewiſe in the Oar, it rather profits than hinders, but the ſaid Oar muſt not have much earth mixt in it, and that which is on to it muſt be taken from it by waſhing off the ſame with fair Water.) One, two, three, or more pounds of this leaden Oar thus waſht, muſt be put into a ſtrong Cucurbit, and ſo many pounds of Spirit of Salt muſt be (put on and) drawn off thencefrom, which Spirit of Salt, as being a moiſt and Philoſophical Fire, will reduce the pure Oar of Lead, which it toucheth every where and in all places of the ſame, into a bright, Snowy, eaſily Meltable, and fugacious Calx, which is to be well waſht with Water and be dried: This is that metallick Bath, and that dry Water of the Ancients, which wets not the hands, and which is able to perform admirable things in the Metals.

But that this Philoſophical and moiſt Calcination of the Oar of Lead, may be accompliſhed without any coſts, ſome Salt Water muſt be poured upon the Spirit of Salt, in the Cucurbit, that the Salt may aſcend together with the Spirit, and may augment the ſame with ſo great a quantity of Spirit, as may quit the coſts of the Oar and Fire, and yield you the dry Saturnine Bath for nothing, which ſaid Bath may be employed various ways about the waſhings and emendations of the Metals. For out of the Oars which never underwent the burning by the Fire, and were never as yet deprived of their growing faculty, this Bath thus prepared is to be preferred far afore that, which is made of the molten Metal.

I do here open to the ſtudious of Art, the Gate that leads unto moſt great ſecrets, which were never ſo clearly manifeſted by any Man. It muſt neceſſarily therefore be, that either God muſt put a ſtop, or that the Operator or Labourer himſelf muſt be of a ſtupid and ſimple capacity, if he cannot learn from theſe inſtructions, as much as to live in quietude, and ſo furniſh himſelf with Food and Rayment.

If therefore God ſhall vouchſafe his Bleſſing unto thee in the uſe of this ſecret, then give unto him, the beſtower of all good things, thy utmoſt thanks, and be not unmindfull of the Poor. Suſtain thy life by the works of thy hands, and let thy light ſhine before the blind, neither bury the ſame enviouſly in the Earth. Do good to every one, that it may be diſcerned and appear what Tree thou art. Entertain not too great an opinion of thy ſelf, but remember that thou art a Man and mai'ſt err and fail. Give no body occaſion of quarrelling and brawling. If an unjuſt conflict be brought upon thee, commit thy ſelf wholly unto God, and he will ſuccour thee. Give place to the greater, and ſpare the leſſer, God will defend thee and ſuppreſs thine Enemies.

The Heathen Philoſophers accounted the Prophet *Ezekiel* as a clowniſh Philoſopher, becauſe he wrote ſo very clearly of the Divine Myſteries. For they took it very untowardly, that he was not ſo envious, as to involve ſuch great Myſteries in ſilence, but wrote ſo openly of the ſame.

He that will now-a-days make it his deſign to wind himſelf out of the crew of Sophiſters, and ſuch kind of Philoſophers that putteth together hurtfull Books, conſiſting of fine Spun, and ſeducing words onely meerly for their own gain, and without any profitable information at all in them; he I ſay that would free himſelf from ſuch, overcome them, and bear away the prize, muſt imitate that countrey-man, who on a time entring into a Fencing-School at *Norimberg* did behold the Fencers artificially combate together ſo ſtrongly and ſo long, untill all the others being tired, and forſaking the Stage, there remained but onely one as ſole victor; who, with a diſdainfull look, contemning all the reſt, aſſured himſelf of the victory.

Being

Being therefore about taking up the Prize-Money there deposited, out steps the Countryman, saying, you shall not have the reward, except you beat me too off the Stage: Fight therefore he must with the Countryman, or forsake the prize; but promising himself an assured Victory, he exerciseth his most curious and artificial postures, which he had learned in the fencing School, thereby to make a speedy dispatch with the Countryman, supposing that the Countryman would be frighted, and laying down his Weapons, quit the Stage. The Countryman being no ways scared stood very quiet (as confiding in his own strength) so long, till the Fencer approaching nearer with his oblique Flourishes, made as 'twere a Wheel afore his Nose, whom the Countryman struck all along, with such a smart blow as made the Hair of his Head flye off, and the Bloud run about his Ears. So artificial a Combatant as this being or'ethrown, he was asked by that plain Countrey Fellow, whether or no he would yet once more try the fortune of the Play, but he would no more prove the Countrey down-right blows of a Non-Citizen, but left both the Money and Honour of the Victory to the Countryman, who being asked how he durst adventure upon so artificial and experienced a Fencer, and could so o'recome him, he replied, that he perceived the Fencer used may oblique Skippings, but was no strong Man: and therefore I opposed my strength to his artifical Flourishes, and so with one blow struck him down. By this History it is evident, that that finely Spun, and sophistical prating of the Schools, makes nothing to the purpose but a certain experience, and an infallible knowledge of things both is and so remains the sole Mistress.

For the sake of these that are lovers of divine and natural Miracles, 'tis expedient that I yet farther manifest some certain secrets of Salt, which are hitherto altogether unknown, and shall be shewn unto my Friends in my Laboraory. Nor do I at all doubt, but that some few will be found who will easily understand these things, and look on them as things credible. But I matter not, whether they credit me who speak the very truth or not. It sufficeth me that I can, not onely perform the things I say, but likewise shew them to Friends, whereby they may be able to reap some benefit and profit therefrom.

Salt may be so introverted by the Operation of the Fire, as that it shall lose its sharp properties, and acquire a sweetness, and be brought by the help of other Vegetables and of Water, unto Fermentation, and so yield a good and sweet burning Spirit, a clear, sweet, and strong white Ale, conserving its taste for many years; various drinks, not unlike in taste to the Wine made of Honey and Fruits of Trees, strong and clear Vinegar, and white Tartar, fully as profitable for such Operations, as the common and natural Tartar of Wine is wont to be used about, and may be with those others [afore mentioned] prepared with small charges.

The Air and Fire do in a short time transmute Salt, into true natural Salt-peter, which is no small profit.

The Fire doth likewise very easily endow common Salt with such kind of properties, as render it capable of fatning and dunging barren Fields, Vines, Fruit Trees, Hops, and all other Garden Herbs as well as Sheeps or Beasts Dung.

Salt is also so changed by the Fire in few hours time, as to put on a magnetick nature, and attract the moisture and water out of the Air, and to retain it with it self a long while, and therefore is not easily dried up by the Sun. Corn, as Oats, Barley, Rye, Wheat, Pease, Beans, and other Seeds being steeped in such a Salt for a Night, do by means thereof, grow up the speedier out of the Earth. It is very profitable therefore in the Summer Season, wherein there's scarcity of Rain, and especially in sandy Grounds, because it holds the Rain Water a good while, so that it is not so easily dried up by the Sun. Besides, too, that Salt is of such attracting virtues as that one ounce thereof, being put in some little Glass to two ounces of Water, hardens all this Water, in the likeness of Salt, so as that you may carry the same about you in a Paper; whereas there were two parts of Water to one of Salt.

This Salt abounds with yet many other wonderfull virtues, some of which I have declared in my Treatise, *of the Nature of Salts*, stiling it by the name of *Sal Mirabilis*, and that not without good cause. It is of the form of Salt-peter, and is void of all Acrimony, it is a little bitterish to the tast, and is of a Balsamick Nature. For being rub'd on Beef or other such like Flesh, it keeps the same, though exposed to the open Air, from being infested with Magots, and from being corrupted: And therefore it is an efficacious subject, with which as being a most efficacious Balsom, dead Bodies are conserved from corruption. It converts all things put into it, in long process of time, into an hard Stone, and abounds with many other wondrous virtues, which (for certain causes,) I pass by in silence at this time. *Paracelsus* calls it *Sal Enixum*, but I *Sal Mirabilis*.

Nor ought it to seem at all wonderfull, that common Salt doth so easily obtain by the Operation of the Fire, a better and sweeter quality. I do in very deed affirm, that not onely the common Kitchin Salt, but even those too, which are of a most biting corrosivity, as *Aqua Fortis*, *Aqua Regia*, Oil of Salt, of Sulphur, and of Vitriol, may by a certain sweet Vegetable, (without the addition of any contrary Salt) be brought to such a pass in three hours time, as that a Man cannot perceive the least Corrosion at all in them. Nay more, if this very Salt hath dissolved up any Metals, it does not part with them, but holds them still: so that the corrosive Solution of Gold which is made with Oil of Salt, becomes a sweet liquor, which likewise comes so to pass, with the Solutions of Silver, and of the other Metals: so that by this way excellent Medicaments may most easily be made out of Metals.

New Wines being fermented with such a Salt, do change their Tartar into sweet Wine, and become clear in a months time, and suddenly have both the taste and odour as old Wines usually have. Certainly it is a secret of very great concernment, when by reason of the coldness of the Air, the Wines cannot attain unto their due maturity. *N. B.* There appertains to this fermentation, a singular and excellent Artifice, by which the Wines and other drinks are promoted to a speedy and strong fermentation, insomuch that the Wine boils in the Vessel, though the Vessel should be set out to the Snow and Ice in the coldest time of Winter: whereby the Wines must needs be made better, stronger, and sweeter. It is a very artificial invention, hitherto concealed by me, but now I am minded to reveal the same unto my Friends.

By the ſame Salt too, Wine, Ale, Metheglin, and other drinks may be in ſhort time turned into good and ſharp Vinegar without the help of the Sun, or of a warm Stove.

If therefore any one needs for his Operations any diſtilled Vinegar, he may even diſtill it in wooden Veſſels, without any ſparkle of Fire, onely in the Air, by the proper efficacy of the liquors themſelves, and by the help of the Air: and this in ſuch wiſe, as that a whole Barrel of diſtilled Vinegar will not coſt ſo much as one Token, the Barrels or Veſſels excepted, which verily is a moſt Artificial Diſtillation.

Thus likewiſe by the ſame means may a ſweet burning Spirit be diſtilled out of Ale, Wine, and other the like Liquors.

Any common Wine may be rendred ſo ſtrong by the help of a certain ſweet Salt and artificial fermentation, as that it cannot be drunk becauſe of its ſtrength. Some Pots full onely thereof, being poured into a Barrel full of ſmall Wine, will make the ſame ſo ſtrong, as to equalize it with generous Wine. He that is ſo minded may add ſome ſweet Spices in the fermentation, and ſo make it the more ſweet, more efficacious, and more wholſome, and ſo a little quantity thereof being poured into another Barrel will make all the Wine therein contained become ſweet and good.

Out of common Salt may eaſily be made good Allum and Vitriol, no leſs uſefull for the Dyers than the natural are.

It is likewiſe a thing eaſily feaſible, and that too in few hours ſpace, to turn the ſame into a fiery nature, and make it have the ſame property as the Salt made of Wood Aſhes, and of the burnt Lees of Wine and ſuch like, and as Pot Aſhes have, and may ſerve for the Soap Boilers and be applied to the ſame uſes that thoſe Salts are uſed for.

Moreover, ſtore of ſweet Spirit of Salt may be gotten with ſmall charges out of common Salt, ſerving not onely for the preparation of many excellent Medicaments, but alſo for the maturation of the meaner and unripe Metals, as we ſaid afore.

Theſe and the like wonderfull things, yea and very many ſuch effects incredible to the unskilfull doth that contemptible and common Salt produce, to the exceeding benefit and profit of mankind: which excellent things I neither would nor could (for the honour of God, the giver of all good things, and for the ſake and profit of mankind) any longer conceal. But ſome or other may object and ſay, if by the help of common Salt, ſuch great things may be effected, why do not you prefer the ſame before Salt-peter, which you have ſo exceedingly praiſed in the third Part of the Proſperity of *Germany*, and have conſtituted it the Monarch as it were of the whole World: whereas notwithſtanding it is ſo venemous a Dragon as is wont to devour all things. Can't theſe two Salts I pray, namely the common and Salt-peter, divide the Government of the World between them, and bear ſway and command both together.

To ſuch I anſwer, that although that common Salt be the producer of many wonderfull effects, yet muſt it needs give place unto Salt-peter, which being inflamed and on Fire is wont to overturn huge Mountains, and blow them up into the Air, which thing ſeeing common Salt cannot do, 'tis but fitting and right that it ſhould be dignified with ſo great a Title. However, being by the Operation of the Fire and Air made equal unto Salt-peter, and performing the ſame effects, it may then worthily be graced as Salt-peter is with the Title of Monarcy.

The effects which I have attributed to common Salt and Salt-peter, I can every hour ſhew, in very deed, to be moſt true. Ill therefore do they do, that bark againſt me for ſaying that Salt-peter is a univerſal Diſſolvent, and that endeavour by their tatling reproaches to obſtruct the truth.

Why do they not produce ſome better thing, ſeeing they will not admit of this univerſal Diſſolvent? ſuch Men as theſe do nothing elſe but bewray their own fooliſhneſs, and kick againſt the Pricks.

Had they ever done ought, or ſet their hands to work, for the ſake of ſearching throughly into nature, they would never ſo boldly contemn, and reject that, which they never as yet underſtood. They behave themſelves very baſely, and clearly diſcover unto all Men's view, that they have ſuckt in their uncertain and fooliſh Opinions, by the bare reading and hearing of uncertain and dubious Writers, whoſe meaning notwithſtanding they underſtand not; for my part I remain conſtant in my Opinion, and ſay, that Salt-peter is an univerſal Diſſolvent, and is able to diſſolve all the things in the whole World, if it be made uſe of in three forms or ſhapes. Whatſoever the acid Spirit thereof, or the Eagle with its ſharp Claws cannot effect, its fixed Salt, or the fiery Lyon will accompliſh: and whatſoever is impoſſible to be done by theſe two, the Griffon which hath its riſe from the Eagle and Lyon, will artificially perform.

N. B. The acid Spirit of Niter doth not diſſolve ſulphureous ſubjects, but mercurials onely: Contrarywiſe, the fix Niter doth not ſeize upon mercurial ſubjects, but ſulphureous ones; but the flame of Salt-peter performs both: which verily is wonderfull, that things ſo unlike ſhould in ſome few hours time be extracted out of one and the ſame ſubject. For the corroſive Spirit prepared out of Salt-peter by Diſtillation, and likewiſe the fix Salt, are moſt bitter enemies to each other, which ruinating and flaying one another, and being dead, return agen unto that which they were afore, and partakes of both natures; which the Ancient Philoſopers do clearly point out unto us by the Griffon, which is headed and winged like an Eagle, and the hinder part of its Body like a Lyon, as we have mentioned more at large in the foregoing third part of the Proſperity of *Germany*.

Upon him that rightly underſtands this ancient Fable of the Griffon, Lion, and Eagle, doth the Sun ſhine, for he will get no ſmall profit to himſelf thencefrom. Whatſoever the Corroſive Eagle diſſolves and tears a-pieces, that the fix and fiery Lion precipitates. And whatſoever the Lion devours, that the Eagle doth agen ſnatch from him: but they kill each the other, of whoſe dead bodies the Griffon exiſts, which hath the body of the Eagle and Lion. By how much the oftner this labour is repeated, ſo much the more potent and ſtronger doth the Griffon come to be, [eſpecially] if both the Eagle and the Lion have filled themſelves with food and are grown fat; or by how much the bigger the Eagle and the Lion are grown, by ſuch Subjects as are agreeable unto them, afore their mutual fighting; the Griffon doth alſo become of magnitude proportionable.

Once every day therefore may ſuch a conflict, ſlaughter, revivification, and tranſmutation of theſe two fighting and capital Enemies, *viz.* the Eagle and Lion,

Lion into the Griffon be made. But if you would have it profitable, then muſt *Vulcan* ſharpen *Saturn*'s Sythe, by which he may divide the Griffon [in twain,] and may turn whatever proceeded from the Eagle, into the Eagle again; and may tranſmute that which aroſe from the Lion into the Lion agen. When the dominion of the Griffon is divided, and that the Eagle bears ſway onely over his birds, and the Lion onely over his beaſts, like two Kings, then all is well, and there's no war. But if once the Eagle endeavours to ſnatch away from the Lion his prey, then ariſeth a great war, and of ſo long a continuance, till they have ſlain each the other, of whoſe bodies the Gods doe make the Griffon. But when the Griffon becomes too diſdainfull, and affecteth Tyranny, and deſigns to bear rule over birds and beaſts together, he is agen divided by *Vulcan*, by the perſwaſion of old *Saturn*, that ſo he may return by a reiterated tranſmutation into the Eagle and Lion: which wheel [or rotation] of reciprocal tranſmutation doth never reſt, but converts it ſelf [or turns it ſelf round] in a perpetual courſe for Man's puniſhment, as long as it ſhall pleaſe the moſt high God, who, at laſt, will put an end to all fightings, ſlaughter, and contention, that afflict this world: at which time all the Eagles and Lions which ever were in the world, ſhall be turned into the Great Griffon, which will rend and overthrow the whole Earth.

This time all pious Souls doe expect and wait for with ardent deſire, and many ſighs, that they may be at laſt freed from the talons of the Eagles, which rend all things a pieces, and from the claws of the roaring Lions, and enjoy everlaſting peace and quietude.

Thus much may ſuffice to have been ſpoken of Salt-peter at this time, which, how it may be prepared very plentifully, and with great profit, out of the Salts of Vegetables, Animals, and Minerals, I have already declared in the foregoing third Part of *the Proſperity of Germany*. He now that dreams of ſo managing his affairs as to reap benefit and profit to himſelf thenceſrom, may inquire into the buſineſs by a more accurate meditation and ſearch. Yet let him know, That Salt-peter may be very eaſily made of many vile Subjects, which may be every where had: of which Salt, if you have plenty, you cannot want other things. For not onely moſt excellent Medicaments againſt all kinds of Diſeaſes may be made with Salt-peter, as likewiſe the growing faculty of Fruits ſpringing out of the Earth, be promoted, as of Corn, Wine, and ſuch like things neceſſary for the ſuſtaining of the life of Man; but alſo pure good Gold may very eaſily, but with great profit, be gotten out of the imperfect Metals.

Seeing then, that by means thereof, a man may be ſupplied with firm health, food, and rayment, and with Gold and Silver, what other thing is there, I pray, that he can want? That which I have ſo often ſaid, I doe here repeat and affirm, That there is not in the whole World any ſubject that can compare with Salt-peter, much leſs be preferred before it.

Such a noble, yea ſo kingly a Subject therefore as this is, well deſerves to be moſt highly honoured by us, and to be ſearcht into by the utmoſt of our endeavours, becauſe of the ſo great benefits it beſtows upon Mankind. We will therefore proclaim and pronounce Salt-peter to be the Monarch of the whole World, though all its and my enemies, who endeavour to beſpatter our honour and repute with the brands of infamy, doe even burſt for malice.

O moſt fooliſh men, with how vain a hope doe ye expect the Lion and Monarch from the North, as the *Jews* doe their Meſſiah, who came above 1600 years ago. The Lion of the North, and the Monarch of the World is even at this time preſent, and hath always been, but yet hath been known but by a few; the full and perfect revelation of which, God alone knows. I doe verily think the time is now at hand; Theſe things which are known unto us concerning him, are all of them but particulars, and very few too. But if the ſaid Northern Lion ſhall find out and dig forth the treaſures which lye hidden in the Mountains, then will he at laſt exhibit his power to be ſeen, and ſhew himſelf to be the Monarch of the whole World.

Salt-peter is that great and fire-ſpitting Dragon, the keeper of the Golden Apples, and that venomous Baſilisk which kills all things with his looks. If he be but fixt and made conſtant in the fire, then is he that Salamander living in the fire, and that Phœnix the bird of the Sun, which having gathered pure Gold out of the Sand, uſeth it to the making of her neſt, and arriving to its utmoſt old age, burns her ſelf; out of whoſe Aſhes other Phœnix's are produced.

He that deſires to know more of the Griffon, Phœnix, Dragon, Baſilisk, and Salamander, all which doe exceedingly thirſt after Gold, and dig it out of the Earth and keep it, may read *Pliny*, and other the ancient Writers of natural things; as alſo *Ambroſius Calepine*'s Dictionary of eight Languages, and of the laſt Edition.

The Concluſion.

THeſe (O friendly Reader) are the things which I was willing to publiſh at this time for the Countries good; Had I had more time and opportunity, I would have added more profitable ſecrets, and ſuch too as are of no ſmall moment. If I find that theſe here written are acceptable, I will in a ſubjoyned Appendix make a clearer interpretation of ſuch obſcure places as may be herein met with.

N. B. I would have the friendly Reader here know, that although I have written theſe Four Parts of *the Proſperity of Germany* clear enough, above my other [Writings] [or more clear than the others] yet notwithſtanding I have reſerved for my ſelf and my friends ſomewhat amongſt all the Proceſſes, and ways of operation, ſo that I know how to effect the preparations of Salt-peter, and to make uſe of its various properties, in extracting Gold and Silver out of the Oars, and in the melioration of the imperfect Metals, and tranſmuting them into Gold and Silver much eaſier, and far more compendiouſly, and with much leſs coſts.

The things which I have written, I have written for every one, Friends and Foes together; The other, and thoſe better Secrets, I have reſerved to my ſelf and my friends. This ſhall now (God willing) be my chiefeſt care, that my Laboratory, in which the truth of the whole buſineſs ſhall be ſhown unto my friends, may be fitted up and made ready. In the mean time, the Princes and Noble men, whoſe territories ſuch metallick treaſures are in, and cannot be extracted by the help of common fuſion, may conſider, whether or no it will be agreeable to their minds to make uſe of theſe my Artificial, and not vulgar Operations in extracting the Gold and Silver by

by Salt and Salt-peter out of ſuch-like auriferous ſubjects. If it ſhall ſeem unto them a thing worth while, to inſtitute ſuch operations for the profit of their Countries, they may ſend unto me a fit perſon, and one that knows how to deal in the fire, and one that is of a ſilent diſpoſition, and of good education, who may learn the very work it ſelf in my Laboratory.

But they that are Lords of ſuch places as doe not contain in them thoſe auriferous Minera's or Oars, and can nevertheleſs get ſtore of them from the bordering Countries, and are deſirous of amending them, and uſing them for their profit, we deny not to ſhew and diſcloſe the Art unto them too, (the perſons always conſidered,) namely that artificial and moiſt Extraction of the volatile and fix Gold, not onely out of Minerals, Stones, Sand, and Clay, but likewiſe out of the already-molten Metals themſelves, as Lead, Tin, Iron, and Copper; in which Metals, there is often times hidden much Gold and Silver, which admits not of being extracted by the common melting Fire; but is eaſily drawn thereout of, by the maturation and ſeparation that is cauſed by Salt and Salt-peter, and ſo brought to common uſe.

All theſe things we will not be loth to make friends partakers of, as likewiſe of other rare and artificial inventions, and ſuch as are profitable to all kinds of men, none excepted; which are ſuch things as will bring much profit to my Country, and ſhall be ſhewn in my Laboratory, publickly, and privately unto friends: but with this proviſo, namely, if the ſaid friends will faithfully promiſe unto me, that they will with a faithfuil ſilence conceal thoſe ſecrets which they ſhall ſee and learn from me, and improve the ſame, onely to the honour of God, to the comfort of the ſick, to the help and ſuccour of poor Widows and Orphans, and to the defence of the Truth; and not uſe them to Diabolical diſdain, and deteſtable pride, and other fooleries and vanities.

The End of the Fourth Part of the Proſperity of Germany.

THE FIFTH PART OF THE Proſperity of GERMANY.

Clearly and Solidly demonſtrating, and as it were ſhewing with the Fingers, what Alchymy is, and what benefit may by the help thereof, be gotten every where, and in moſt places of *Germany*. Written and Publiſhed to the Honour of God the giver of all good things, primarily; and to the Honour of all the great ones of the Country; and for the Health, Profit, and Aſſiſtance againſt Forreign Invaſions, of all their Inhabitants that are by due right and obedience ſubject unto them.

LIKE as the weighty command of God injoyns all Children to love their Parents, and to ſubmit themſelves unto them, with a due obedience in all lawfull and equitable things, and to yield them due fidelity: Even ſo likewiſe doth he require from every ſubject a due obedience to their particular Magiſtrates, that they moſt willingly obey them (with a faithfull obſervance, as being the Fathers of the Countrey, and to whom they are tied by all right of Fidelity) in all ſuch things as paſs not beyond the boundaries of equity, and withall it behoves each ſuch ſubject to communicate any thing whatſoever that is requiſite for their ſafety and defence, and for the repelling and beating off the Enemies.

The conſideration of this dutifull ſervice, which binds every Subject to his Magiſtrate, ſtirred me up (ſeeing that greivous and ſudden Fire which almoſt deſtroyed all the Kingdom of *Poland*, and therefore fearing, leſt by dilating it ſelf it ſhould alſo detri-

ment

ment our Countrey) to take care in publishing, some four years ago, a little Book intituled the first Part of the Prosperity of *Germany*. I therein taught, by what means the vast plenty of Corn and Wine might be so concentrated as to be easily preserved and kept, and so be made serviceable for the common good, and of exceeding profit, in future calamitous times.

I likewise shewed the way and manner of some other Arts, and such as are most usefull for the common good of the Countrey, 'mongst which, that discovery of making Salt-peter out of old and rotten Wood, (from which may a vast quantity thereof be had) is none of the meanest.

I have also bethought my self of another way of pleasuring my Countrey with no small benefit afore I die, and thus I intend it.

First of all, I would have the whole World know by this small Work or Treatise, that I have a mind to demonstrate the most profitable and principal secrets which I have treated of (partly openly or plainly, and partly obscurely or more darkly) in those four parts of the Prosperity of *Germany*, and that both to the high and low in my publick and private Laboratory, afore this year is run about. To this end, I have already the chiefest and most necessary Utensils at hand, and when all the necessary provision is gotten together and made ready, those said *Arcanums* which will be so exceedingly profitable to the Countrey, shall be visibly demonstrated to such as the chiefest Magistrates shall make choise of, and to other honest Citizens and Men of the Countrey. And amongst these *Arcana's* which are of such great benefit, the three following ones are the most principal.

The first is, the making of good Salt-peter out of contemptible, and every where obvious subjects.

The second is, how by the help of this Salt-peter, easily and copiously to extract the fugitive, and the fixt Gold and Silver and Copper out of the *Minera's* or Oars, with a great deal of profit and mighty advantage, and that without any melting or fusion by Fire.

The third is this, the truth and certainty of Alchymy shall be shown, and it shall be proved, that it is not any vain dream, deceitfull Phantasie or Fallacy, as the greatest part and number of its haters and *Ignoramus's* have hitherto slanderously reported; but that it is a most true Artifice, and of wondrous consequence, by the help of which, (it making use of Fire and Salt,) all contemptible Minerals and Metals, and which are of no great gain, as *Lead, Iron, Tin, Bismuth, Cobolt, Zink, Lap Calaminaris, Marchasites*, all other fugacious Minerals may be so fixed and ripened, as that much and true and constant Gold and Silver may be extracted out of them with small costs, but abundance of profit.

These three secrets verily are in my judgment of great moment and therefore are worthy for the great ones, and Princes, and other Fathers of the common Weal to be made partakers thereof by revealing the same unto them.

I have deemed it worth while, in a few words to illustrate the incredible utility thencefrom arising, that any one that hath but any reason may perceive it.

And first, as concerning Salt-peter, the whole World knows what profitable and needfull a subject it is. There can never be so great a quantity thereof prepared, but it may not onely be applied to necessary uses but also to such as bring a great deal of profit. I forbear to speak of its most great use and exceeding profit in making Gun-powder, which no Kingdoms, no Common-wealths can want to defend their Countrey withall, and drive off their Enemies.

And if there were no need of it for this thing, yet would it be of mighty moment, and bring in abundance of profit by extracting Gold and Silver out of the poorer Oars which will not bear the charges of melting, and now there will never be so much Gold and Silver, as that it will not be of any profit to a Countrey.

Nay more, if there were no want of Gun-powder, nor of Gold nor Silver, (which time when 'twill come, and how it should come, for my part I cannot see) yet (having Peter) we cannot be in want of Bread; and how great soever the plenty is of Wine, and Corn, and Fruits, yet there is never wont to be too much. Corn and Seeds being macerated with Salt peter afore they are sown, and the Roots of Vines and Trees being moistned with a very little of its liquor, do not onely grow more plenteously, but also produce more plenty of Fruits, and such as ripen far sooner, and are of a sweeter Taste, than if they were dung'd with that stinking Beasts Dung liquor. If then, Salt-peter be a subject so excellent, as that we can by no means want it, and that it may so easily be prepared out of Wood and Stones in plenty; if above all other things it makes the Earth fruitfull, if it can extract plenty of true Gold and Silver out of the contemptible Sand and Flints, what can we desire more from it, unless it be a sound and healthfull Body, whereby we may in fulness of health quietly and peaceably enjoy such great benefits vouchsafed us by God? But now this very same Salt being justly called the wonder of the World can bestow upon us, this very health we speak of.

I do affirm that Alchymy it self, or the Transmutation of the lesser, or meaner Metals into the greater or more noble, and into Gold and Silver, is not a vain dreaming dotage, and an opinion void of reason, but is the very truth it self, and confirmed by many experiments; the demonstration of which, I do, God willing, this Summer not rashly but advisedly set about shewing it by publick and evident experiments, and its use for the good of the Country.

Now then, forasmuch as the Countrey is every where sufficiently stored with Iron, Lead, Salt and other mineral matters, and such like contemptible subjects, and yet notwithstanding there is not at present any profit arising thereby; verily it cannot be, but that in a few years time (if such melting Houses were in all places made) Men would be rendred Masters of great Treasures. Who knows what God will do, and whether or no it may not so come to pass, that it may be said of the great ones of [our] Countrey as is mentioned in Holy Writ concerning *Solomon*. And he made Silver as plentifull as the Stones that lie in the Streets, *&c.*

But that I may yet more open the Eyes of the Studious after all, and show them, by what means all these things may come to pass, and fall out true, I do hereby assure him, that there's no need of taking those Metals for this Fusion, that are already pure enough as Iron, Lead, Tin, and already fit to be imployed about Mans use; no, those common and sulphureous leaden *Minera's* or Oars which are found to be uncapable of yielding profitable and venal or

ſellable Lead, are well enough for this Fuſion and operation we ſpeak of; and ſo likewiſe thoſe Irony and Coppery Oars, out of which (ſeeing they admit not by nature of any fuſion or melting) mallable fuſile Copper or Iron cannot be extracted. For this Operation of ours needs not Copper, Iron or Lead to work upon, as being content with thoſe poor ſort of Oars, and with the bare Salt which the Earth is every where well repleniſhed withall, ſo that there's no cauſe to fear that there will ever be a want of any matter for ſuch an Operation.

But what need I ſpeak much of theſe unknown, and ſo very profoundly hidden ſecrets of nature, ſeeing I have openly enough taught already, in the ſecond part of the *Miraculum Mundi*, by what means, pure and natural Gold may be gotten out of every Herb. This very thing I publickly demonſtrated in my Laboratory above a year ago, in the preſence of moſt learned Men, Profeſſors, Doctours of Phyſick, and other Men both noble and ignoble, as their Teſtimonies, which are [under] hand affirm.

But there's no need of that, foraſmuch as the manner it ſelf of the Operation is publiſhed in Print, and manifeſted to every one, and there can hardly paſs over one years ſpace, but that even a thouſand Men or more may imitate the Operation and ſearch into the truth it ſelf of the buſineſs.

But that the well minded Reader may have a little more light, and may himſelf ſee what foundations the work I have undertaken is built upon, I have judged it altogether neceſſary in a few words to ſet afore your Eyes, what Alchymy it ſelf is, and whether or no it has any foundation in Nature and Art. For if ſo be any ingenious Man gives an Herb, an Animal, or a Man any name, certainly he does it not raſhly and without any ground, but well knows and underſtands for what cauſe he intitles any thing by ſuch or ſuch a name, and it is chiefly done on this account that by ſuch aſſumed names the nature of the Herb, Animal, or Man, and its properties might be known. A few Examples will illuſtrate it the more.

What reaſon have the Phyſicians and Philoſophers of old to call the Herb St. *Johnſwort*, *perforata?* Becauſe its leaves are full of ſmall holes, and it is ſo ſigned by nature, to ſhew, that it has eminent virtues [and peculiarly appointed] to take away and cure external and internal ſtabs and wounds of the Body, and this is confirmed by experience. Why are ſome Herbs called *Saxifragers?* becauſe their nature is, to cleave aſſunder and break through great heaps of Stones in their growing up, and to penetrate through old Walls, by the growth of their hard roots. Their Seeds likewiſe are like unto the ſmalleſt Sand and after a ſort ſtonyiſh and do break the ſtony matter in the Reins and Bladder of Man's Body and bring it forth. So a Serpent hath its denomination from creeping, becauſe it wants Feet, and creeps and crawls along on the Earth.

A Shoemaker hath his title from his making and ſewing of Shoes. A Black-ſmith is not wont to be called a Gold-ſmith, becauſe he works not on Gold but on Iron, and he hath his denomination from Iron, which he is occupied about.

The ſame is to be underſtood of the word Alchymy, which denoteth no other thing ſave a Fuſion and liquefaction of Salt, and ſo it teacheth us, what cauſe it was for, that the Ancients called the Tranſmutation of Metals Alchymy; *viz.* becauſe of the fuſing or melting of Salt, without which, no particular Tranſmutation of the viler Metals can be perfected and accompliſhed. Therefore it was not an unadviſed and raſh action that the Ancient Philoſophers did when they put the title of Alchymy on the Tranſmutation of Metals, but as a Gold-ſmith is ſo called from the Gold, which he is a Labourer in, ſo is it with this.

The name therefore doth openly point out the matter tranſmuting the baſer Metals into the more noble, *viz.* Salt, which being as an univerſal Agent does not onely maturate and bring to due perfection the Metals generated in the Bowels of the Earth by a natural Operation, but it alſo does the ſame out of the Earth by the Operation of Art, Salt alone, and Fire alone are ſufficient for the maturation and tranſmutation of the unripe Metals. For Salt (as being the Agent) is driven or forced as 'twere by the Fire to diſplay its virtues upon the Metals and by exerciſing its power, to render them better and more noble, as *Paracelſus* openly witneſſeth in his *Cælum Philoſophorum*, ſaying, that the Corporal mixtion of metals though commixt a long time and kept ſo in Fuſion, is neither wont to give, (nor indeed can contribute ſo much as ought to their Tranſmutation. But if ſo be the metals are to be perfected by any amending, they are to be conjoyned in a ſpiritual commixtion, and ſo they come to their hoped-for amendment; and this is very agreeable to the truth, and evidently ſignifies, that without a ſaline agent and fire, there is no way of attaining to a particular tranſmutation and bettering in the metals. *Elias* the Prophet, whoſe name inverted yields the word *Saliæ* [or Salts,] did not work his moſt great miracles afore he came into *Zarpath*, or *Sarepta*, that is, into the melting Houſe [or fuſing Work-ſhop] where he filled the poor Widows Oil Veſſels, that ſo ſhe might have wherewith to live in a time of ſcarcity. For as long as the terreſtrial Salts do lie hid in barren and ſtoney Mountains, in which there grows nothing but *Juniper* Buſhes, and are [there] nouriſhed by the Stars, they cannot ſhew forth their wonders, but they are wont then to diſcloſe them when they come into the melting Houſes. Even ſo is it with Salt, when it comes into the melting Shop, it doth effect ſo much as not onely to fill the Oil Barrels but the Cellars and Barns too, and that plentifully, but eſpecially when the due [or ſuitable] Salts *Elias* and *Eliſa* do come together, and *Elias* is carried in his fiery Chariot into Heaven, and ſundred from *Eliſa* and doth ſend down a double portion of his Spirit upon *Eliſa* his Companion; by which, *Eliſa* being ſtrengthned and acquiring more ſtrength than it had afore, is made fit for greater and more powerfull Operations.

But amongſt thoſe moſt great miracles, this was an eminent one, that after the departure of *Eliſa* the Prophet out of this life, there was another dead Man thrown into his Sepulchre who by the touch of his Bones was reſtored to life.

Therefore, like as this miracle did ſupernaturally happen by the divine power: Even ſo [doth it come to paſs] naturally, by the virtues of our *Sal Mirabilis* corroborated with a double Spirit, which doth not onely reſtore a dead [body] and Wood turned by the Fire into Charcoal, when it is caſt into the Sepulchre, that is into the Earthen Pot or Crucible to the white Bones of our *Sal Mirabilis*, and bring it (in the ſpace of one quarter of an hour) unto its former viridity and life, and with this very green Liquor of the Wood may other half dead Trees, as alſo

so other things be restored to viridity, and increase, and their former fertility, more than by any thing else: But also, even various dead insects, if they be put to our *Sal Mirabilis* can recover life again. And although that this may seem a new unheard of, and incredible thing, yea a meer Paradox to any one, yet is it as true as truth it self; the true way of which Operation I will (God willing) describe and shew clearly in the first Century of my general Appendix.

But although that these wonderfull Operations of my *Sal Mirabilis* may seem such, as to be never capable of being effected yet, to all such as know its Composition, 'tis a thing very easily accomplished. Nor can it be but that the divine wonders should be still more and more laid open by the help of my *Sal Mirabilis*, and be exceedingly sown abroad, and made known to such as are ignorant. Which being done, the World will conceive a far other guess Opinion of Alchymy, and judge otherwise thereof than hitherto it has done.

But that such as are admirers of the divine and natural wonders, may clearly see how large an extent those things I have hitherto discovered, are of, I cannot omit the adding of the solar Work or Smaragdine Table of *Hermes*, the Father of all the Philosophers, the which being in my judgment accommodated to this discourse of mine I will illustrate.

But to summ up all I will say, I have here briefly declared, that if a Spirit be elevated or sublimed from a true Salt by the help of a strong Fire, or be drawn from out of its Body, and be again returned to the same own fixed Body left behind and be restored to it in a due manner; that fix Salt, gets double the strength and virtue it had, (as hath been shown concerning my *Sal Mirabilis*) and does perform things wonderfull; which *Hermes* and *Basil Valentine* have hinted unto us in these next ensuing expressions.

Hitherto belongs the small Circular Figure, noted Pag. 19. *at the beginning of the third Part of the Prosperity of* Germany.

The Smaragdine Table of Hermes, *&c.*

[See it at the end of the First Part of *Miraculum Mundi.*]

The Ænigma of Brother Basil Valentine.

THere is a Stone, of all others the least precious, out of which is extracted a fugitive [or volatile] Fire, and out of this Fire is the Stone it self made, it is of colour white and red and yet is it no Stone. In this Stone doth nature operate, and produceth a Limpid or clear Fountain, which choaketh in the Waters and swallows up his own fixed Father, untill at length a Soul be given [or restored] him, and [his] fugitive Mother be made like [him] in the Kingdom. Likewise this Stone brings power and great strength, it exceeds the Sun in Age, [its] fugitive Mother [is] prepared by *Vulcan* and [its] Father [was] begotten by the Spirit. Likewise the Soul, Body, and Spirit consist or abide in two, out of which, all things are; these things are of one, and is one thing, conjoyning the fix and the fugitive. They are two, and three, and one, and if thou art ignorant of this, thou will be frustrated and deprived of the effect of the Art.

Adam is placed in a Bath, in which *Venus* finds her like, now this Bath was prepared by that old Dragon, when he had lost his strength and power. But now this is nothing else (saith a Philosopher) but a duplicate *Mercury*. In this is its name hidden, which is to be sought after with all diligence and continual labour.

The Event proves the Actions.

IT seemed unto me very expedient to set down here in this place, these few, but exceeding weighty words of *Hermes* and Brother *Basil*, because they do so notably square with this Work of mine which I have here described. And therefore I do here again affirm what I have often said, *viz.* That he who knows Salts well, but especially Niter and Vitriol, and knows how to conjoyn them, is well skilled in Medicine and Alchymy, and sufficiently enough understands that the Smaragdine Table of *Hermes* is Vitriol, an excellent Smaragd or Emrald, and that Niter is (according as *Paracelsus* and *Basil Valentine* have at large described) the Kingly Infant of the Sun, with whose descriptions we at present content our selves. I will make a more prolix mention of the same in my Centuries, those things that I have adjoyned here I could not, for certain reasons let slip and pass by.

Now by these few words it is manifest, what virtues Salts are endowed withall, and what miraculous effects they shew, when they are cast into the melting Fire, *viz.* Such Salts as are corroborated with a double Spirit poured down from above. These Salts (I say) are wont not onely to fill the poor Widows Oil Vessels, but even the Cellars and Barns with Wine and Corn.

But I would not that any should interpret it amiss, in that I make some kind of Comparison 'twixt the wonderfull virtues of Salts, and the miracles of the Holy Prophets: For verily the thing it self admits it, and by such Comparisons, the natural light is greatly strengthned, which thing we shall speak more at large of elsewhere.

Whosoever he be that well knows the nature and properties of Salts, and is something skilled in the management of the Fire, he will hereby easily learn thus much, as easily to perceive that there is such a thing, as a profitable transmution of the more vile Metals into the more noble ones.

But there are requisite to this Operation manual Arts, peculiar Furnaces, and singular Commixtions of Metals, the knowledge of all which, he must have that desires beneficially to employ himself in these Operations. The whole Operation with all the appurtenances requisite, and all the things thereto appertaining, shall (if God please) be exposed to be seen in my Laboratory this Summer. As my Writings lately published, and the Labours performed in my Laboratory the last year, do sufficiently enough testifie that I have both publickly and privately demonstrated and manifested the truth of the chiefest secrets which I have mentioned in my Writings. And as for what remained of being done the last year, this present Book promiseth the demonstration of, this Summer. What Writer alive, did ever endeavour the demonstration of the truth of his Writings by most evident experiments? None at all save *Glauber*.

There-

Therefore I doubt not but that ſeeing this little Book offers the Countrey ſuch great benefits and Commodity, there will not onely be ſome of the Vulgar ſort, but alſo many of the Noble ones [or Magiſtrates] be found, to whom the reading of the ſame will not be a tedious thing.

And now I return again to ſpeak of Alchymy, openly diſcloſing my Opinion concerning it, and firmly averring, that Salts onely have power to waſh, maturate, and perfect the unripe Metals.

But ſome or other may here ſay, if Alchymy be the fuſing of Salt, by what means can it poſſibly ever be, that Gold and Silver ſhould be gotten out of Salt by melting? If there were Gold in it, cannot it be gotten forth eaſier than by melting in the Fire? I anſwer, you are not ſo to underſtand it, as if huge heaps of Gold could be gotten by a bare fuſing and melting of Salt. No! no ſuch matter. But when the Metals have Salts adjoyned to them in a due manner, and ſo undergo a melting Fire, they do (in that fuſing) diſplay their virtues upon the Metals, and do ſo bring them to a maturity as to yield forth Gold and Silver. For Salts are the univerſal ripening Agents, both in the dry and in the moiſt way, as is clearly evident from the third and fourth part of the Proſperity of *Germany*, ſo that there needs no more to be ſpoken as to this.

But yet, that theſe things may not ſeem new, or altogether abſurd, I ſay, that in all Salts there lies hidden ſpiritual Gold, but yet it cannot be extracted from them without the addition of the Metals. For all the things that are, are generated, encreaſed, and ſuſtained by the Sun, (and amongſt theſe may be reckoned up the ſmalleſt Vegetable) do contain the fugacious beams of the Sun hidden in them, which ſaid beams may by the benefit of Art be made corporeal and fixt. This I taught and demonſtrated more prolixly in the ſecond part of my *Miraculum Mundi*. I will teach the ſame in the firſt Century of my general Appendix, which ſaid Appendix ſhall illuſtrate all my Writings with more clear notes; and I will evidently ſhow the way, by which true and natural Gold is to be gotten (by the benefit of a certain precipitating matter, out of Sea Salt, both by the dry and by the moiſt way. This Operation brings not any conſiderable profit, but doth in very truth ſhow the poſſibility of the thing. But he who knows the way of conjoyning true and due [or proper] Metals with legitimate [or ſuitable] Salts, and of handling them in a due and true way of Fuſion, will get Gold and Silver out of all the imperfect Metals, and that with no ſmall profit; and this ſhall be demonſtrated in my Laboratory this preſent Summer by God's help.

And for the more evident proof hereof, it ſeems worth while to adjoyn a Story out of the Journal of *William Litgou* of *England*, [rather *Scotland*] who Journying through *Italy*, teſtifies that he ſaw in *Trapundia*, a City in *Sicilia*, much Gold excocted or drawn out of Sea Salt; which thing, ſeeing it agrees with my Opinion, and confirms what I ſay, I will add the words of the Authour himſelf as they are in *Latin*.

" The fourth City of *Sicily*, is *Trapundia*, ſcituate
" in the Weſt-ſide, and oppoſite to the City *Biſerta*,
" ſeated on the *Barbarian* Coaſt of *Africa*, which
" yields pure Gold, which is exported by the Mer-
" chants into *Italy*, *Venice*, *Dalmatia*, and *Greece*.
" It is excocted in ſome Artificially made Salt-pits
" by the more vehement beams of the Sun, which
" Pits are filled and emptied every month. Now
" the Salt here on the Sea-ſhore, has a colour like
" the redneſs of a Ruby, or Corral: The City is al-
" moſt the one half of it imployed about working
" thereupon. The Gold it ſelf being purged is diſ-
" tributed throughout the whole Chriſtian World.

Theſe are the words of the ſaid Authour, I know nothing of the certainty of the thing it ſelf, he that is deſirous to find out the truth of this Relation may eaſily do it. As for my ſelf, I eaſily credit this Relation, becauſe of the Mount *Ætna* which always is burning in that Iſland, and becauſe of the Sulphur too, which all the Land of *Sicily* abounds withall. And verily it ſeems a thing altogether likely, that when the Inhabitants of this Iſland upon the Sea-ſhore, make Salt of the Sea Water for their neceſſary uſe, by digging Pits in the Earth after the manner of all thoſe hot Countries, and letting in the Sea Water, and that the warm beams of the Sun ſeparate [or any of] the unprofitable ſweet [or inſipid] Water, in Vapour, and that that Water of Salt is endued with a notable ſharpneſs; it extracts the Sulphur out of the Earth which is there in plenty every where, and it renders this [Sulphur] by the help of the heat of the Sun, conſtant, corporal and fixt, ſo as that it can be afterwards molten in a melting Furnace into Gold. If now the moſt hot beams of the Sun, and Salt Water can change common earthly Sulphur into Gold, why may not the ſame be done alſo by the benefit of Fire, Salt, and Art.

That all Gold is at firſt naturally generated of a pure Sulphur in the Earth, no body will indeed deny. That any Sulphur may by the help of Fire and Salt be fixed and changed into natural Gold, daily experience witneſſeth, not onely in my own Laboratory, but in my Diſciples Laboratories too, the which, viſibly demonſtrates, and even by manual Operation confirms the truth of thoſe things which I have mentioned in the ſecond part of my *Miraculum Mundi*, hereabouts.

That which is mentioned in the old Hymn of the Ancient Church-Fathers, *viz.* who made Gold of Rods or Twigs, and Gems of Stones, ſeems to the ignorant altogether as Paradoxal, new, and incredible: and from which 'tis gathered that St. *John* the Evangeliſt made Gold of Sticks of Wood, and Gems of common Stones: I can in a few words demonſtrate that both are true.

Diſſolve common Sulphur, or any Vegetable in common Salt, this Solution will make the Sulphur of a red colour. Keep this Solution for at leaſt one hours ſpace in the Fire, you ſhall find a little of the Sulphur changed into Gold; to the red Salt, adjoyn the Calx of *Saturn*, melt them by Fuſion into one Body, and reduce the Lead by a Cupel, you ſhall find a grain of Gold, it yields indeed no profit but demonſtrates the certainty and poſſibility of Art. But if any one ſhall be skilled in managing this Operation in great quantity (as ſhall be done this Summer in my Laboratory) he will not complain of loſs, but will always get profit.

But let this ſuffice as to the making Gold out of any Wood, or any Herb, by the help of Fire and Salt.

Let us now ſee by what means Stones of manifold colours may be made by the help of Salt, out of Wood or any Herb. Adjoyn to the red Salt made of Wood, a little Powder of white Flints, put them in

in a Crucible, and melt them in the Fire, that they may become a red Glass, resembling almost the colour of a Ruby; if you keep them longer in the melting, the red colour will be changed into a green, and have the likeness of an Emrald: After this, comes a sky-colour, resembling a Saphir, then follows a yellow, not unlike a Jacynth: then in a longer continuance of Fire, it becomes black and like an Agath. Indeed these Stones are no harder than common Glass, but as to their colours and beauty do exactly resemble the precious natural Stones.

These two *Arcanum's* indeed do as to the outside view seem not very excellent, but yet I believe, the well minded Reader, to whom I offer them as a pledge or Love-token for to remember me by, will not think them (seeing they teach the extracting of Gold out of any Wood or Vegetable, and how by white Flints to make Stones of several colours) of so small a moment or value, as they appear here to be, but will believe that he has a foundation laid open for him, to arrive to greater secrets.

As concerning these kind of wonderfull things, and Transmutations hitherto unknown to the World, and changing things into more noble and better Species, I will treat more at large in the ten Centuries, in which, my Writings shall be declared with more evident and clearer Explications, to which I refer the well minded Reader, concluding this Book with those Verses of *Ovid*.

Jamque opus exegi, quod nec Jovis ira, nec Ignis,
Nec poterit ferrum, nec edax abolere vetustas.

And now, a work I finisht have, of which, Jove's *wrath,*
or flame,
Or Sword, or all devouring time can ne'er raze out the
name.

An APPENDIX TO THE FIFTH PART OF THE Prosperity of GERMANY.

Clearly and perspicuously revealing and declaring, (for the benefit and profit's sake of the whole Countrey) by what means those three *Arcana's* promised in the said fifth part are to be advantageously effected. Together with an adjoyned Explication of some obscurer places which are not so clearly disclosed in the third and fourth parts of the Prosperity of *Germany*, as likewise in the first Century.

Friendly Reader,

I *doubt not, but it will seem a wonder to many, that* Arcana's *of so great moment and so much utility should be laid open by me, in so perspicuous and evident a description, as for every one thoroughly to know them.*

However, any Body may easily perswade himself that I have not so done without weighty causes, which to reckon up here at present, I judge it not so altogether necessary, but that it will be more commodious to refer it to some other convenient time. The chiefest and which is the most over-swaying reason amongst all the rest, is this, viz. *the perverseness of some abusive Men, not onely endeavouring to make my Writings envied* [*or hated*] *by Men of common rank, but also by the great ones, by their lying reproachfull slaunders; and especially most falsely averring, that those three* Arcana's *which I promised in the Fifth Part of the Prosperity of* Germany, *are of no profit,*

and therefore cannot be effected with any advantage, and that I my self ſought after nothing elſe by promiſing their diſcovery, ſave onely by impoſing them upon [*or ſelling them unto*] *others to ſcrape ſome Monies together. Now foraſmuch as this is the property of Slanders, to be admitted far eaſilier and readilier than the truth it ſelf, and that for this reaſon many have diverted their minds from the truth of this thing by buſying them about theſe Calumnies, and ſo have not known how the caſe ſtands; but (on the contrary) ſeeing I am conſcious of mine own Innocency, and am far wide of thoſe Crimes ſo falſely charged on me, I have judged it moſt juſt and moſt highly neceſſary, not to ſuffer thoſe moſt falſe Accuſations to reſt upon me, but to ſhew the contrary to the Eyes of the whole World, and by demonſtrating and diſcloſing the very truth it ſelf, to recover my honour ſo perfidiouſly and treacherouſly ſnatcht from me; the which could not poſſibly be done by any better way than this.*

Neceſſity therefore required the Work it ſelf to ſpeak, and to defend its own ſelf, which indeed is a true and genuine defence, and way of ſtopping the ſhameleſs and lying Mouths of all reproachfull Slanderers. God will in time recompence ſuch falſe Mens moſt wicked Works, whereby they have exceedingly injured me. Mean while every one may apply theſe moſt profitable inventions to their uſe, and undertake the doing one or other of the Operations whereby they may reap ſome benefit, which I wiſh them from my Soul.

Nor do I doubt, but that a very many Men will, by following the Doctrine by me preſcribed, and inſiſting upon the foot-ſteps of my Writings, which are founded on the truth, as being a ſure Foundation, get themſelves no ſmall profit; *whileſt they quietly and peaceably enjoy the gainfull practiſing on my* Arcana's: *And eſpecially of that moſt eaſie ſecret, by which, fugacious and volatile Gold is extracted out of all kinds of Flints, (every where plentifully offering themſelves, and ſo by the help of Lead, is rendred Corporeal. Which Work verily is ſuch, as that one Man doth no ways damnifie another by, but may rather help and profit him. Therefore do I at preſent affirm to every body with that truth which God loves, and will defend, that all the following Operations which I manifeſt in the publiſhing this little Treatiſe, have been wrought by me not once onely but often times, and have been ſhown to many others, ſo that no body has any reaſon to doubt hereof, nor need he be ſollicitous about any other thing but how wiſely to manage, the Operation, and to be diligent about his labours. But if it ſhould ſo fall out as that a Man ſhould commit an errour or two, which may eaſily happen, let him not aſcribe the errours he commits, to the Art it ſelf, and thereupon to accuſe it of falſity, but let him rather inquire into the occaſions and reaſons of his own errours, and without doubt by ſuch enquiries will he attain his end, and get the hoped for fruit: in which thing, my firſt and ſecond Century will by an eaſie Manuduction help him.*

Theſe are the things which for the truths ſake and to witneſs it, was I willing to produce. And I do hereby ſignifie to every one that now my publick Laboratory is at an end, and ſhall remain ſhut for time to come, which I was willing every one ſhould know.

[*The firſt*] *Operation ſhewing the way of reducing any Lead, or any Vein of Lead by the help of common Salt,* [*and*] *by Coals, into Aſhes, in the Furnace called* Stichoſen, *that ſo the Gold and Silver may be extracted with profit.*

TAKE of Lead or a Leaden Vein two parts, and of common Salt one part. The Lead Oar is to be ground in a Mill, and ſo are they to be commixt, and by little and little thrown with a Shovel upon the Coals in the Furnace, ſerving to make Aſhes, and which has Pipes or Chimnyes fitted thereunto to receive the fume and the aſcending Flores. That molten part of Metal and Salt which falls through the Grate is to be again taken up with your Shovel, and caſt in upon the Coals untill the whole Metal, or all that metallick Vein ſhall be turned into Aſhes. Then farther, all the burnt matter, is to be freed by divers waſhings from all the defilements, and the remaining Aſhes of the Metal or Metallick Vein, is to be reduced into a Metal in a Furnace which the *Germans* call *Stichofen*. Theſe incinerations and reductions are to be ſo often and ſo long repeated, untill you find (by making trial with ſome little piece) that your Lead is now fitted to be handled or wrought on in the Hearths or Furnaces by the Fire of Separation. For then in the Hearths or Teſts it is changed into Litharge, whereby it may the more commodiouſly yield forth the Gold and Silver, which by the Fire and Salt are therein maturated.

N. B. But you are here to obſerve that the leaden Oars can indeed be commixed with the Salt, and ſo thrown in upon the Coals: But now Lead admits not of being ſo dealt withall, for it is not mixable with the Salt, and therefore it requires that the Salt be firſt caſt in upon the Coals, and then muſt it be thrown in afterwards at top of it. And this way is to be obſerved and ſo often repeated and ſo long, always throwing in, firſt the Salt then the Lead, till the Lead being turned into aſhes, hath wholly loſt its metallick Fuſion. The ſaid aſhes are to be waſht with Water and reduced in the Furnace, on ſuch wiſe as we ſpake of but now.

N. B. Other leſſer Metals may be added to the Lead or to the leaden Vein or Oar, and ſo be reduced into Aſhes together, as Tin, Iron or Copper. But yet theſe leaden Oars are more advantageous and profitable if they are taken alone, as being more fit for this kind of labour, ſeeing they have already in them Iron and Copper, and yield not any good and vendible Lead, by reaſon of their wild nature, and ſo there's no need of burning up Copper and Tin which are already vendible.

N. B. Whileſt

N. B. Whileſt this Incineration is done, many Metallick Flores does aſcend up into the Receptacles appointed for the ſume to go up in, and which are adjoyned to the Furnace, which (if need be) may be taken out, and by waſhings be freed from the Salt which aſcended together with them, and by Reduction be reſtored or reduced to their former body: and will yield Lead which contains in it Silver, and is to be converted into Litharge like other Lead, that the Silver may be ſeparated therefrom.

This likewiſe is heedfully to be obſerved in the other *Minera's* or Oars turned into Aſhes, that afore their Reduction, they be thoroughly waſht from all the Salt, and the light filths or defilements are to be well ſeparated from the metalline body; for if this be neglected, the Salt being forced with the ſtrong blaſt of the Bellows would carry off the Metal together with it ſelf, and the Aſhes of the Coals would hinder the Fuſion of the Metal it ſelf, and reduce the ſame into *Scoria's*.

As concerning the Reduction it ſelf, this is well to be regarded, that the Fire muſt be kindled in the Furnace at leaſt two hours afore the Aſhes of the Oars that are to be reduced, are to be put in, that ſo the Furnace may be thoroughly bright-hot within; for if it be not through fiery-hot, the Caſt in *Minera's* melt not, and being not molten they lie in the Fire, and hinder the blaſt of the Bellows, and ſpoil the Operation it ſelf.

Theſe labours therefore require a skilfull Artificer, and one verſed in ſuch Operations, for they are not ſo very Facile as they ſeem to many, to appear to be.

Then farther, this is likewiſe to be noted, that if the *Minera's* or Oars that you take to this Operation are full of Sulphur, and that that Sulphur is not wholly taken away by torrifying [or calcining them] it will by its fierceneſs reduce in the melting the body of the good Metal into *Scoria's*, and inſtead of Metal preſent you with Droſs. And this is that Incineration and Reduction which I have ſhowed in my Laboratory, both to Friends and Enemies; But yet I have (ſince that time) found out a far eaſier way of doing this labour, by the help of which, one Man will do more in one day, than he could otherwiſe in eight days. But becauſe this way is not as yet made common, it ſeems not convenient in my Opinion to divulge it here; for as much as I have determined with my ſelf in this preſent Appendix to diſcloſe onely thoſe things which I expoſed to be ſeen in my Laboratory by others.

By what means Gold, Silver, yea and Copper too, may with great profit be extracted out of the poor Metallick Veins by the moiſt way, and which cannot quit the coſts of doing it by Fire.

FIrſt of all, the metallick Earths are to be made red hot, and to be quenched in cold Water, that ſo being made brittle they may be ground in a Mill. If Sulphur beadmixt in them, then muſt they by a foregoing fireing be freed from the ſame, becauſe the Sulphur hinders the *Aqua Fortis*, from duely diſſolving thoſe Oars. Being now thus prepared, they are to be put into the ſtronger Glaſſes, or into Earthen Cucurbits made of the beſt Clay, and the following Water is to be poured upon them, and is to cover them over three fingers breadth. The Cucurbit being filled with theſe matters is to be ſet in a Caſe [or Pot] full of Sand, and prepared for this uſe, and all the Water is to be drawn therefrom by Diſtillation: which is not onely all of it again recovered, but withall doth get it ſelf an encreaſe or augmentation from the Salt-peter or the Salt, ſo that there aſcends more Water by Diſtillation than was poured on.

The Oars are to be taken out of the Cucurbit, (or Cucurbits, if there were more Pots uſed) and being taken forth you muſt pour common Water thereupon to extract the remaining Salt thereout of, in the which Salt is found the Gold and the Silver that was in the Oars.

N. B. This is to be obſerved in this labour, that all the Spirits are not to be drawn off from the Oars even to the dry Salt; and this not onely to ſhun the dammage that might happen by breaking the Glaſſes, but alſo for this reaſon, *viz.* that there may be left behind with the Salt a little Acrimony, becauſe of ſome Salts which eaſily paſs into Salt-peter when ſome *Aqua Fortis* is drawn off them. And albeit that *Aqua Fortis* will eaſily turn the whole Body of Kitchin Salt into Salt-peter, yet notwithſtanding 'mongſt all the Salts one Salt admits of a ſpeedier, another of a ſlow Tranſmutation, according as it is more or leſs akin in its nature unto Salt-peter.

And therefore to prevent this errour, ſome humidity is to be left with the Oars. For when all the Spirits are drawn off, and the Salt is turned into Salt-peter, the Water would not be ſharp enough to hold up the Gold that is extracted, when the Solution is made, for the Water would diſſolve barely the Salt-peter, and leave the Gold remaining behind with the Oar.

If this errour ſhould chance to be committed, the Salt-peter is to be extracted out of the Oars with the Water, and more new Salt muſt be poured on upon the ſame Oars together with the *Aqua Regis* that was drawn off by Diſtillation; that ſo this *Aqua Regis* having been once abſtracted may not afterwards tranſmute all the Salt thereto added into Salt-peter. For by how much the oftner the *Aqua Fortis* is drawn off from the Salt, ſo much the leſs is the Salt turned by it into Salt-peter, and at length, it will come to ſuch a paſs as to remain juſt as it was afore the abſtraction [of the ſo oft drawn off Spirit.] For this is the nature of *Aqua Fortis*, *viz.* to tranſmute half its weight of Salt into Salt-peter at the firſt time; the ſecond time it tranſmutes but a fourth part; the third time much leſs: and at length will trauſmute none at all; but puts on the nature of Spirit of Salt: which notwithſtanding is moſt fit to extract Gold and Copper withall out of the Oars *in infinitum*, if Salt be thereto added, out of which, it is wont to get it ſelf a perpetual encreaſe (and be) like other Spirit of Salt.

Now then, to prevent this inconvenience, the *Aqua Fortis* may be left off for altogether, and thoſe Minerals and Metallick Earths may be extracted with the Spirit of Salt onely, and Salt added thereunto: onely obſerving this thing in the Diſtillation, *viz.* that ſome of the humidity be left behind with the Oars whereby they may be the eaſilier taken out of the Glaſſes.

Moreover this is to be likewiſe known, that Gold, Silver, and Copper may be extracted out of their Oars or Earths even without *Aqua Fortis* or Spirit of Salt, if onely Salt or Salt-peter be but added. For if ſome Oil of Vitriol or of Sulphur be poured upon the Water of Salt-peter, or that the Water of Salt be acuated therewithall, it becomes ſtrong enough to extract Gold, and after the extraction and diſtilling the Phlegm

Phlegm off, there follows by diſtilling a pleaſant Spirit of Salt, or from Salt-peter a good *Aqua Fortis*. This labour therefore is more gainfull and leſs troubleſome, than if *Aqua Fortis* or Spirit of Salt were uſed thereunto.

There are other eaſier and more compendious ways of extracting Gold, Silver and Copper out of their Earths, which, ſeeing they have not been as yet ſhown in my Laboratory, I ſhall ſilently paſs them by at preſent and that not without reaſon. But yet there is frequent mention made of the like [Operations] in my firſt Century, in which he who has an earneſt deſire to know more of thoſe kind of ways, may make enquiry.

The Preparation of ſutable and proper Waters to extract Gold, Silver and Copper out of poor Oars.

TAKE of Salt-peter one part, of common *Aqua Fortis* two parts; theſe being joyned together, extract Silver and alſo Copper. But to extract Gold out of its Oars or Minerals, there muſt be taken one part of common Salt, and four parts of *Aqua Fortis*. One pound of Salt, and four of *Aqua Fortis*, make four pounds and ½ of *Aqua Regia*, the other half pound of Salt ſtays behind with the Metallick Veins or Oars in the bottom of the Cucurbit, and contains the Gold that was in them, and is to be extracted with common Water.

The way of getting out the Gold and Silver out of the waſht-out Salts by precipitation, and of reducing them to their peculiar bodies without detriment or loſs.

IF it be Water of Salt-peter and hath Silver in it, the Water of Salt being poured in, precipitates the Silver to the bottom. But if Water of Salt, and has Gold in it, the Gold is precipitated by pouring on a *Lixivium* which hath in it a little liquour of Flints. And now this Water it ſelf thus mixt by pouring (other precipitating liquors on it) yields (by decoction) moſt excellent Salt-peter. And the *Aqua Fortis* and *Aqua Regis*, which aſcended by Diſtillation, are fit to make new extractions of Gold, Silver, and Copper out of their Earths; and by iterated extractions (by the Salts and Waters thereto added) do they get a perpetual encreaſe, inſomuch that in theſe extractions of Gold, Silver, and Copper, there are not required at all any other expences ſave thoſe few, beſtowed on firing. Therefore in the beginning of this Work there is not required ought elſe but one onely pound of *Aqua Fortis*, becauſe in the progreſs of the Work it proceeds on to an infinite encreaſe, yea, enough for the extraction of many thouſands of pounds.

(Hence is it that this Work is an unheard of Operation, and doth almoſt exceed all belief, and from which there muſt an immenſe gain of neceſſity accrew, becauſe Gold, Silver, and Copper may by this means be extracted out of their poor Metallick Earths without coſts.

There remains yet one thing which is to be heedfully regarded in the precipitation of the Gold and Silver. A common *Lixivium* cannot precipitate all the Gold out of the *Aqua Regis*, and therefore I bad you add to the *Lixivium* ſome liquor of Flints, and this will alſo appear in my firſt Century.

Therefore it behoves every one, clearly to ſee whether or no he makes uſe of true and genuine Liquor of Flints in his Operation, that ſo he may not inſtead of it, uſe a bare ſimple *Lixivium* onely, and ſo commit a great errour, as it hath happened to ſome as I have been told.

But he that can't make true and good liquor of Flints, or elſe has it not at hand, may ſubſtitute in its ſteed, common Spirit of Urine prepared in a Copper ſtill, which together with the ſaid liquor precipitates all the Gold out of the *Aqua Regis*.

N. B. But this Gold thus precipitated by Spirit of Urine, fulminates like Gun-powder, unleſs it be burnt with commom Brimſtone afore the Reduction, and that this fulminating faculty be taken away from it, which inconvenience the liquour of Flints is not wont to bring.

N. B. If there ſhould be much Zink, Iron, or *Lapis Calaminaris* in the Oars of Gold or Silver, the *Aqua Fortis* or *Aqua Regis* would not all aſcend by the Diſtillation, nor get increaſe; but ſome part thereof would ſtay with thoſe Metallick Earths, and with the *Lapis Calaminaris*, *&c.* and by adhering thereunto be concentrated: but yet there would not be any loſs by that, for by the pouring on a Lixivium of Wood-aſhes, may it be turned into good Salt-peter, of as much value as may eaſily recompence the charges of the *Aq. Fortis*, or *Aq. Regia*.

Beſides, you are likewiſe to obſerve this, that if there ſhould be Copper admixt in the Oars of the Gold and Silver, the *Aq. Fortis* would extract the Copper too, as well as the Silver.

But now the neareſt way of ſeparating theſe two Metals from each other, is this, Let Spirit of Salt be poured to the *Aq. Fortis*, and it will precipitate all the Silver out of the *Aq. Fortis*, down to the bottom, and the Copper will be left in the water; which if you put ſome Iron into, it will ſtick to the Iron, and by this means be gotten out of the water.

This water now, after the Metals are withdrawn from it, is fit to make new Salt-peter with, and by addition of Vitriol to yield a new *Aq. Fortis* by diſtillation.

Alkali Salts do in the Fuſing bring the precipitated Silver to its former body, which otherwiſe is very fugacious.

The Copper is turned into excellent Verdigreaſe. And ſo the Oars of Copper, though never ſo poor, may be extracted, and that with no ſmall benefit: Becauſe the Verdigreaſe made of the bare Copper is twice the price of the molten Copper it ſelf.

The manner of making good Salt-peter in plenty, out of Kitchin-Salt and Calx-vive.

TAke the Stones of Lime, which have been thorowly changed or reduced into Powder by the Air, four parts: of Kitchin Salt, or Common Salt, one part, [by weight, and not by meaſure] whether pure or impure [it matters not:] and of this mixture is a thickiſh paſte to be made by moiſtning it with Urine, or, in want of that, with Water; which is to be made up into a Pile with Wood, and ſo may it be made *Stratum ſuper ſtratum*, of what bigneſs you pleaſe: and it may be done in a Furnace made for that purpoſe, or elſe in the open Field abroad in the Air. But you muſt beware in the building up of this Pile, that the maſs of Salt and *Calx vive* be not too thick laid, and too much; but it would be better to make it up in balls or pellets, that ſo they may be well fired by the flame, which muſt penetrate everywhere through the pervious heap or pile: which cannot

not be, if the mass be spread too broad, and so stop up the passages of the flame.

The heap being made as big as you are minded to have it, the fire must be put under, and so long fed, till all the wood is burnt, and the balls themselves have been red-hot, a whole hour at least: that the Acrimony of the Salt may in so great a heat be changed by the *Calx-vive*, and get it self a milder nature, and consequently be so much the easier transmuted into Salt-peter.

N. B. The Salt that is on this wise transmured, is most fit for dunging Lands, and to be used instead of the common beasts dung, as I have at large taught long ago in many places of my Writings.

This is the preparation of turning Salt into Salt-peter, which Artifice, if any be minded to work about, it is necessary for him to order his Operation this following way.

The manner of making Salt-peter out of this prepared Salt.

FIrst of all, this introverted Salt must be exposed to the open Air, and beams of the Sun; but yet so, as that the heap may not be moistned by the Rain, and it must lie in its heap the heighth of some three or four Feet; the which heap is to be wetted either with Man's pis or Beasts; or if there be not enough of this to be had, then with bare water onely, that so the pellets or balls lying quietly for some days, may be dissolved and be mixed with the rest of the matter.

Now when the warm Air hath consumed all the humidity, and dried up the heap, the aforesaid moistning is to be repeated; which being again consumed, and the heap dried, the labour of repeated moistnings and exsiccations is to be so long continued, as long as necessity requireth: For in long progress of time is the Salt-peter generated, which must be washed out with water, and by decoction be reduced into Stria's or Crystals.

This generation of Salt-peter proceeds indeed slowly on, but yet it brings a great profit. For if once the Salt-peter be but generated in such an heap of Salt, and the reliques left after the washing out of the Peter be again put to the same heap, there will new Salt-peter be generated in process of time: so that new Salt-peter will every year offer it self to be washt out of the heap: and this work may be continued without end.

But he that would have some Salt-peter from this inverted Salt in a shorter tract of time, let him know, that the Seed or Ferment of Salt-peter must be added unto the said heap, that so this same Seed may get augmentation from the Salt, and encrease and grow, like as an herb is wont to grow in a fat and saline Earth. For all things have their Seeds, and doe draw their Encrease out of other Salts. The Seed of Salt-peter is volatile, as is its acid Spirit: its Root is fixed Niter; which being implanted in all sharp Salts, doth beget Salt-peter in a most plentifull manner, and such as is very good, or even better than that which ariseth out of those acid Salts and Alcalies.

We doe not here show this propagation of fix Salt-peter by acid Salts, because it is described in the following Labour and Operation.

Therefore like as any Vegetable may be propagated and multiplied not onely by the help of its Seed, but even of its Root too; Even just so is it with Salt-peter, for it admits of propagation and multiplication by the means both of its Seed and of its Root, as other Herbs doe.

As concerning the Seed of Salt-peter, it is very easily preparable by those who deal in metallick separations and extractions by the moist way. For if Gold be separated from Silver by *Aq. Fortis*; or that Gold and Silver be by it extracted out of their Oars, this very operation hath already abundantly recompenced the charges laid out thereon, and so it offers it self without any costs, and as it were *Gratis*.

And now, if I pour this water on, instead of common Water, upon the inverted Salt, it does not onely become good Salt-peter, but doth also yield (as being the Seed of true Salt-peter) an hundred fold encrease, after the manner of the Seed of all Vegetables, and doth the same as they do. And by how much the more of this Nitrous Seed is sown in the Earth, so much the more Salt peter, and so much the sooner too is generated. For when a Gardener doth sow his Seed sparingly, he must necessarily have but a thin harvest: and so on the contrary is it to be understood of a plentifull harvest. And if now there should be any one that should upbraid the Gardener with the slowness of his Seed, because it produceth not Buds, nor Stalks, nor Flowers, nor Fruits in a few days space, would not he say that he cannot compell nature, for it reserves to it self its due time, and its natural course?

The very same would I have you understand here concerning Salt-peter: if haply my Enemies, those most ignorant Sheepsheads, would object against me, that seeing the Salt-peter doth not presently, in a few days, grow or spring forth from its seed sown, therefore that seed was not true nor good, or that it is altogether impossible that Salt-peter should be generated so plenteously out of Common Salt: I answer such, as the Gardener does, 'Tis necessary to allow Nature her own appointed time.

But that it may evidently appear, that this my planting of Salt-peter, and that this augmentation may be far more evidently demonstrated, than that of any Vegetable seed; the business may be tried for confirmation sake in a small Experiment, afore you set about a more laborious and prolix exercise, and to prevent your fears of attempting it in vain.

Take the Salt prepared with the *Calx-vive* three pound, and put each a-part in several Earthen Vessels. Take likewise of the Water of Salt-peter already used (as being the Seed of Salt-peter) one ounce, two ounces, and four ounces: with the one ounce of that *Aq. Fortis* commix as much Common water as may serve to moisten one pound of the aforesaid inverted Salt: Then to the two ounces of the same *Aq. Fortis*, adjoyn likewise as much water as may serve to moisten the other pound of Salt with: And so doe with the other four ounces, and therewithall moisten the third pound: Set those three Pots, containing the three several pounds of the said prepared Salt, at the heat of the Sun, but so, as that the Rain may not come, and wash off all the Salt. All the moisture being consumed by the Solar heat, moisten your matters in your pots with Rain water onely, so often, as the drying needs the watering it. When two or three months are over, take out each pound separately by washing it out of the matters in each pot, and you shall find a vast difference, and shall see that that one pound of Salt which had those four ounces of Nitrous seed in it will be all transmuted into Salt-peter, save a few feces: But that pound

which had two ounces of the ſaid Seed poured upon it, will contain a leſſer portion of Salt-peter; and the other which had but one ounce onely will have the leaſt portion. Moreover, if you pour thoſe Salt-waters you waſht out, and which are not yet turned into Salt-peter, upon the feces again, and ſo dry it as afore, and beſtow yet other three months on theſe exſiccations and moiſtnings, and then again boil the Salt-peter out of the Salt, it will be much encreaſed and bettered; and ſo you will have ſo much the greater encreaſe of Salt, by how much the longer you ſhall have proſecuted this Labour. Such Experiments doe demonſtrate, that by how much the more Seed there is ſcwn in a fat and ſalt Earth, ſo much the more plentifull encreaſe of the Seed is to be expected.

But thoſe deriding mockers and perſecutors of Art and Truth may here object and ſay, that the Salt-peter ariſeth from the Salt-peter water onely that was put thereunto, and not from the Salt it ſelf? But I anſwer, That that uſed *Aq. Fortis* is indeed the Seed of Salt-peter, but can never recover the Nature of Salt-peter without the help of ſome fix body: Like as the Seed of an herb cannot become an herb, unleſs it be caſt into a moiſt and ſalt Earth, from thence doth it get its body, and ſo is encreaſed.

Verily I willingly confeſs, that the Spirit of Nitre may be reduced to the former nature of Salt peter, by aſſuming it ſelf a body out of all the fix Salts. But yet, as far as I have hitherto known, by my manifold inquiries and inveſtigations a long time, I could not find any other Salt (ſave the following) by the help of which, thoſe Waters uſed about metalline Waſhings, may be ſooner and better tranſmuted into Salt-peter, like as this, and the following Salts doe: And therefore I doe commend it as of the beſt rank for the making of Salt-peter. The manner of preparing good ſalt Nitre out of the extracted Oars is already revealed in the firſt Century, and therefore needs no ſuperfluous repetition here.

Another Preparation of Salt for the making of Salt-peter.

TAke Common Salt one part, and of a ſulphureous Oar, whch the *Germans* call *Schewelkies*, two or three parts, if they contain leſs Sulphur: But if they have Vitriol in them too, then muſt you take equal parts of both. Grind the ſulphureous Mineral in a Mill, mix it with the Salt, and heat it red-hot by well torrifying or calcining them for two hours (in Furnaces ſerving for ſuch a work,) either upon a Grate, or elſe without a Grate, upon Hearths; that ſo, during this Candefaction, the Sulphur may have ingreſs into the Salt, and may alter it. This Salt being waſht out of the ſulphureous Minera with water, and boiled till a skin gathers at top of the water, it ſhoots into long Stria's or Cryſtals, like Salt-peeter, and taſts like it, but falls into Powder in a warmiſh Air. If it be burnt and prepared by putting *Calx-vive* thereto, after the way afore going, it is convertible into good Salt-peter, but ſooner and in a ſhorter time. If the Minera's you uſe have Copper in them, or any other Metal, yet nevertheleſs may they be gotten out thence by fuſion, for there will be nothing loſt in this operation but the Sulphur; and this muſt have been driven away by burning it, however, if you would have any of the Metal out of the Minera.

N. B. The *Caput mortuum* out of which the Spirit of Salt by the addition of the Vitriol is extracted, yields ſuch a like Salt, and very fit to make Salt-peter withall. There are alſo ſeveral other ways, which yield no ſmall plenty of ſuch Salts, and that in a manner without any coſts, eſpecially if the help of Stone-coals be thereto uſed. Beſides too; this you are to be adviſed of, that (ſeeing the Salt is to be burnt with the *Calx-vive*) one Calx is better than another, for ſome Lime ſtones are more apt for the making of Salt-peter, but primarily thoſe, which when you touch your tongue with, doe yield a fiery taſt; with which ſort, the Lime made of Sea-ſhells doth not compare as to goodneſs.

By what means the Root of Salt-peter is to be implanted in acid Salts, ſo as to be thereby augmented, like as the Root of a Vegetable, being tranſplanted, gets an increaſe from the ſaltneſs of the Earth.

EVen as we have demonſtrated in the foregoing diſcourſe, that the acid Spirit of Nitre is the ſeed of Salt-peter, and doth encreaſe it ſelf out of *Alkali* Salts like as an Herb doth out of the Earth: Even ſo by the ſame reaſon, fix Salt-peter, which is the root of Salt-peter, admits of tranſplantation, yet not by fixed Salts, like as the ſharp Spirit does, but by ſharp Salts, whereto it is to be united by implantation: For, two Acidities, and two Alkalies, cannot produce any new Eſſence, but two Contraries doe always produce a third. The acid Salt, which is of the meaneſt acidity, and which doth eaſilieſt admit of being tranſmuted into Salt-peter, is the common Kitchin-Salt, which we taught the way but even now of inverting by the Minera's of Sulphur. And if that ſuch proviſion cannot be had to prepare it by, the very Kitchin-ſalt it ſelf being taken both in the moiſt and in the dry way, would perform the ſame, as I have already ſhown in other places of my Writings. And as for the making of fix Nitre, you may meet with the way of doing that too and agen in my other Writings, and eſpecially in that place where I have treated of the dry ſeparation of waſhing of Metals, *viz.* when ſulphureous and Antimonial Metals are waſhed by Nitre.

The way of preparing Spirit of Salt, neceſſary for the Extracting of Gold and Copper out of their Oars; as likewiſe of making good Salt-peter of the matter left after the diſtillation is finiſhed.

MIX with two parts of Vitriol or Allum, one part of Kitchin-ſalt, and throw in this mixture upon hot burning Coals, the Spirits of which are to be taken in great Leaden Ciſterns inſtead of Receivers. This operation (beſides the ſalt Spirit it gives) yields alſo ſharp Flores. If any ſhall provide himſelf with double Leaden Ciſterns, and ſhall make the Outer one to hold in it the leſſer Ciſtern, and ſo fill this outer one with cold water, he ſhall obtain more plenty of Spirits by reaſon of this better refrigeration. But ſuch Ciſterns requires a great deal of Lead; for verily even thoſe three alone which I had in my Laboratory contained a thouſand and forty pounds of ſheet Lead.

There may be other kinds of Receivers applied to this uſe, which, to reckon up, would be too tedious in this Book.

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The matter remaining after the Distillation may be ground in a Mill, and one part thereof mixt with two parts of *Calx-vive*; and so balls are to be made thereof, and to be put upon wood and burnt, as we shewed afore, that so they may be transmuted into Salt-peter.

But besides all these, there hath been a far better and more compendious incineration, and bettering of the lesser and more imperfect Metals shown and demonstrated to my friends, in my Laboratory, which requires not so many Circumstances and Labours, as the foregoing more prolix operation, which is performed by throwing Common Salt upon the Coals, does: For it is to be done in a peculiar Furnace, and with purer Salts; and being wrought about a greater work, yields very considerable profit: so that it impregnates Silver and Lead with Gold, with twenty four hours easie labour, and renders them worth the labour of separation.

In like manner, Copper may by the help of such Labours be very much amended, and gets no small portion of Silver, if it be added: so that with a little fire and a very few expences, every sort of Copper, though it has endured the fire scarce twenty four hours, is wont to be so much bettered, as to shew in the Touchstone the marks of two, three, and sometimes six Lots, according as it has been diligently and circumspectly handled. Hence comes it to pass, that by vile and every-where obvious Subjects any Silver and Lead may be maturated by little and little into Gold, and so may Copper it self be ripened without any detriment into good Silver, by a few repeated Labours. Now these operations requiring but small costs, and but a few labours to accomplish it, may be exercised without intermission, and bring vast profit. These inventions are such as never were as yet thought on by any, and so never at any time saw the Light. But now they that saw and learned, in my Laboratory, the great incineration, did not all of them see this Labour and Artifice, and apprehend its use, but such of them onely that stayed out constant, even to the end of the whole Demonstration in my Laboratory. And as for such as too soon forsook their Master and the School, they are (and indeed very deservedly) altogether ignorant of this operation. For should they have been masters of this *Arcanum* too, they would verily have detrimented me more, which God of his mercy prevented, and hereby provided, that all [my Arcana's] should not fall altogether into mine Enemies hands. The Furnace which I used about the said Incineration and Melioration of Metals, is as yet in my Laboratory, and will haply there remain all this *Winter*. But as for mine own part, I have determined with my self to leave off Chymical Labours, communicating them to others, with whom this more compendious bettering of the Metals will be yet longer to be seen. Therefore all the whole Drove of my Enemies, though never so big, will not at all be able to oppress the truth, what mad attempts soever they make against it. For although one or another of them hath theevishly stole from me my Secrets, yet presently the Divine goodness hath largely supplied me with others. I have now laid a sure Foundation in Alchymy, and have kindled a Light for both Friends and Enemies, which will very hardly be extinguisht as long as the World endures.

But now, that some little knowledge may be had of this more compendious Incineration, and bettering of Metals, *viz.* of Iron, Copper, Tin and Lead into Silver, and of *Lune* into Gold; I say that it is to be done in a twofold manner. The first is, when the Metals are destroyed either with common, or else with prepared and moist Chymical Fires, and converted out of their own Metallick being into an Earthy nature and Essence, are imbibed with spiritual Salts, and burnt by a close Cementation, so as by their mutual efficacy and actings upon each other, to amend themselves, and afterwards by reduction and separation to yield forth Silver and Gold with profit. And this Labour admits of being exercised in as great a quantity and plenty as any one pleaseth, and is clearly void of tedious troublesomeness, and great expences, for one onely person may discharge this Operation in one onely Chimny, and that with no small quantity of matter too. Nay more, (and which is of greater moment) if any one shall in this operation make use of such Salts as they call Graduating Salts, which are easie to be got, and cost almost nothing, he will get far greater profit, especially if he shall put Copper-plates to be burnt with the Metals reduced by the said Cementation into ashes, which said Plates, those Graduating Spirits will penetrate wholly and throughout, and in this penetration, better them, and bring them unto a more noble degree, so as to give on the Test, Silver impregnated with Gold. Nor is it necessary that those Copper-plates be separated by Lead in the secret Pot, so to get the Gold and Silver made in them, by the said operation, though they have already gotten a meanly-white Colour. 'Tis better and more profitable to put them yet again in some new Cementations, and urge them more with the violence of the Fire, and they will be enriched with a greater access of Gold and Silver, then afterwards are they to be separated by adding a due [quantity of] Lead, which is [thus] done, when the Lead containing the Gold and Silver, together with the Copper, are melted together into a great Cake, these are to be put in the Furnace, which the *Germans* call *Seigerofen*, that so the Lead melting may flow down, and in flowing or running down may carry away with it all the Silver and Gold that was in the Copper. By this Artifice is the Copper conserved, and is to be a-new made into Plates, and to be used about new Labours, and be again enriched with Gold and Silver by Cementation.

N. B. There is not at all any need of any peculiar Lead for this separation of the Copper, forasmuch as that Lead may be used thereabouts which is molten out of the Powders of the Cement, and already contains in it Gold and Silver, which Metals are conserved by one and the same work in the labour of Separation, and are already gotten by the Gradatory Cements out of the Minerals, and the more imperfect Metals.

And this now is my more compendious Incineration and Cementation of the imperfect Metals, to make them better and more perfect. This Operation have I shown to some Friends in my Laboratory, which will moreover be in many places exercised with profit. And now any one may easily foresee and guess, what shame mine Enemies, (who with their Diabolical Clamours and Calumnies, say my Writings are unprofitable and all over full of Lyes,) must at length be confounded withall, and how basely they have behaved themselves. Nor verily is it to be doubted but that there will be such frequent exercise and so familiar a practice of Alchymy (which is an Art that produceth infinite benefits) throughout

out all *Europe*, that even abundance of Work-men [or Tradeſmen] will leave their Trades, and many Countrey-men leave their Plows, and ſet themſelves about Alchymy, and by the Aſſiſtance of my Writings get themſelves Food and Rayment in an eaſier and pleaſanter way, even out of the contemptible Sand, and abject Stones. Whereupon it will of neceſſity follow, that in all thoſe places where now poverty is rife, plenty of Gold and Silver will again come in ſight. Theſe are new fruits which God beſtoweth in this Age. And every one that gets ſo far as to obtain theſe fruits, let him have regard to the poor and needy, and not forget his Benefactours from whom ſuch things proceeded leſt he pull upon himſelf the wrath and anger of God.

Moreover, there were ſome other *Arcana's* ocularly demonſtrated in my Laboratory, during the ſhewing of thoſe meer prolix ſecrets, the reckoning up of which here I judge needleſs. Some of them are of no ſmall concernment, which by the ſame Siniſter or unlucky miſhap fell into the hands of mine Enemies, and will without all doubt be by them manifeſted. For that very reaſon will I my ſelf reveal ſome, in my ſecond Century (God permitting) that it may not be concealed from any one, what excellent ſecrets I have diſcloſed for the uſe of mankind.

'Mongſt other *Arcana's*, this is none of the meaneſt, which, [*viz.*] teacheth to extract Copper, (by Waters of almoſt no coſt or charges, out of poor Oars of Copper which are every where obvious, and are not rich enough to defray the charges neceſſary for a melting Fire,) and bring it to uſe, and that in great quantity, and ſo eaſily as that without queſtion the poor Countrey-men that can very hardly ſuſtain themſelves, their Wives and Children, will for the time to come ſet about ſuch an Operation, and get ſuch *Minera's* or Oars, or even the *Scorias* of them, to extract the Copper out of them and ſell it, and ſo provide themſelves Food and Rayment againſt a ſharp Winter, whereas otherwiſe they muſt live miſerably in want and poverty. The Operation it ſelf is this.

How Copper may eaſily and very profitably be extracted and made corporeal (without any melting or fuſion) by a certain Water of very ſmall expences.

THere are two ſorts of Oars or Veins of Copper met withall, ſome are mixt with Sulphur, and refuſe extracting with *Aqua Fortis*; inſomuch that you muſt firſt remove the Sulphur from them by roſting as it were and burning them, afore that Salts or ſharp Waters can diſplay their virtues upon them. Now that roaſting (or calcining) then, is to be done on Hearths by the flame of Wood, on which, that metalline matter broken into Powder, is to be unceſſantly ſtirred with Iron Inſtruments, ſo long till it emits no more ſulphureous ſtinch: This done, they admit of extraction with *Aqua Fortis*.

Other *Minera's* or Oars which have no Sulphur admixt with them, need not this calcining, for they are to be onely heated red hot in the Fire and quencht, with Water and ſo broken to pieces, and then are they made fit for extraction.

But all ſharp Waters which diſſolve Copper may be uſed to extract the Copper out of poor coppery Oars, and that with profit, when the Waters are of no great coſts, but are to be had for a very little charges. Such are an *Acetum* or Vinegar of Corn, *Acetum* of Woods, which any Countryman may get eaſily and in great quantity; alſo, Water of common Salt, Water of the Lees of Wine, out of which aduſt Wine (or Brandy) or Spirit of Wine is prepared, and which elſe are caſt away. Theſe two latter are of the meaneſt price, and may therefore be eaſieſt of all gotten. The Operation it ſelf is this.

The Oars being reduced into Powder muſt be put into ſmall and low (Copper) Pans, about the thickneſs of a Span, for if they ſhould lie too thick or compact, they would more hardly be ſtirred with a wooden Stick: Upon them thus lying in the Pans, pour that acid Water the heighth of a Span or at leaſt a hands breadth above the matters; then put Fire under the Pans, let it boil ſtrongly, and let the matter be unceſſantly ſtirred, that ſo the Water coming to it in every part, it may extract all the Copper the more eaſily. When this Water has boiled one or two hours, and ſo gotten a moſt green colour, and that it can diſſolve no more Copper, it muſt be poured out, and more put on, and be on ſuch wiſe boiled ſo long till it hath gotten the ſame colour. Now this pouring on is to be repeated with new Water ſo often and ſo long till it imbibes (or extracts) no more greenneſs, which is a ſign that all the Copper is extracted out of the Oars.

N. B. If there ſhould be but little Copper in the Oars, the firſt Water will extract all the Copper, and ſo there will not need the pouring on any other Water. Nay more, it ſometimes happens that even the firſt Water would attract more Copper if the Oars had had more of the ſame. Therefore the Copper is not to be precipitated out of that Water which hath not extracted Copper enough, but is to be reſerved and poured upon new Oars, that it may be thoroughly impregnated with Copper, and ſo the precipitation with Iron may not be uſed in vain. For by how much the more Copper, the Waters ſhall be extracted (or held up in them) ſo much the greater is the gain, and ſo much the leſs Water is required to this Work.

It is a thing eaſie to be underſtood by him that ſhall thoroughly ſearch into this Operation, and manage it with due diligence, ſo as to commit no errour.

N. B. If you have ſtore of theſe green Waters, put in ſome old Iron for one or two nights, and you ſhall get out the Copper that will adhere unto it like filed Copper, and 'twill leave the Water white and clear, which ſaid Water can be uſed no more about this kind of extraction, but may be poured upon *Calx-vive* mixt with Wood-aſhes, and ſo be dried up, by the Air or the Sun, under ſome Roof to keep off Rain, and from this uſed Water, and the *Calx* or Lime is Salt-peter generated in ſuch a manner as I taught afore.

N. B. This Copper which ſticks on to the Iron, is to be freed from all the Saltiſhneſs by waſhing it with common Water, and is to be afterwards dried, and ſo may be uſed in the ſtead of pure Copper, for if molten it nothing at all differs therefrom, if the Operation be but well managed. Nay more, it has in it a moſt notable Commodity, as being more tender and more pure, and more commodious for many Operations than that groſs common Copper is. 'Tis alſo very fit to be converted into moſt excellent Virdigreeſe, if it be moiſtned with ſharp Vinegar and ſet in the heat.

Moreover I have ſhown in my publick Laboratory, by what means Spirit of Salt, *Aqua Fortis*, *Aqua Regis*, and my *Sal Mirabilis* may be eaſily gotten, and

and that in great quantity too, by a Separatory Sulphur, which is nothing else but Oil of Sulphur or of Vitriol, of which I have very clearly treated in the second part of the *Miraculum Mundi*. Likewise how Gold may in one quarter of an hours space be converted by the *Sal Mirabilis* (in a Crucible) into its first matter; or, into a red, transparent, sulphureous, and soluble Stone, which suffers it self to be dissolved by common Water into a most excellent Medicine. This golden Water being poured to the roots of Herbs, makes them to have a golden property, as concerning this thing you may consult my Treatise of the nature of Salts, and the second part of my *Miraculum Mundi*.

Besides, I have shown to some of my Friends, how in the extraction of Gold and Silver out of the poor Oars a Gradatory and withall fixing Spirit may be received, which is able by graduation to perfect (or exalt) any *Argent-vive* into Gold and Silver, according as the extraction has been made either of Gold or Silver Oars.

This so great a secret hath as yet escaped mine enemies hands, and so has that my secret incineration and cementation of Metals, of which they would likewise have been Masters had they waited but yet two or three days longer; for I presently showed such Operations to those that stayed, and unto other honest Spectators.

To these may be also added that notable *Arcanum* of bringing Lead in one quarter of an hours space to such a pass, by means of a graduating Fulmen, without almost any costs, as to be so impregnated with Gold as to be worth the separating.

These and such like *Arcana's* with many most profitable discourses have been seen and heard in my Laboratory, a tedious and needless Repetition of which I willingly omit.

Finally, to mention somewhat by way of addition, 'tis necessary that I say onely thus much, that happily in some short time, the business will so come about that many Men will not for the time to come take on them such a deal of care about the laborious, costly, and uncertain ordering of Mine-pits, but will rather lay hold on and manage (and that with greater profit) such as can be had and gotten better on the outside of the Earth. But especialy there will not be a few who will set about these Cementations of mine for gains sake, for they have many times many lying idle by them, and which yields them no profit, which by this assisting way they will augment, and without doubt it will be effected too by many.

Verily I cannot at all see (as far as I know) whether there can be found any honester and certainer way of sustaining Life in the whole World, than this true melioration of Metals, which brings with it so great a benefit. For even Merchandise it self though it be so very gainfull, yet doth it stick amidst Sins, as firmly as a Nail does in a Wall.

The Services of Lords and great Men are laborious and full of servitude, which many have experienced. And as for War, that snatcheth away abundance of Men by an immature death.

Far better therefore is it to live quietly with one's Family in some poor Cottage, and to feed on a piece of Bread, than to hunt after uncertain Riches by most great dangers. Therefore I doubt not but there will be many found for time to come, who being holpen by my Writings, will more commodiously sustain themselves together with their Wives and Children, than hath been hitherto done. Nor do I at all doubt, but that many will take it very untowardly, that I have so manifestly and so perspicuously revealed all things. For this is often done and daily is it, that I am upon that account reprehended by others, as the following Letter may witness, the like of which I could have here added more had I so listed.

There is no Body can satisfie all. Even *Jupiter* is not the same (or alike acceptable) to all: One is troubled with heat, another is burthened with cold. What things soever I have written, they are clear and evident to such as are skilfull in the Art, and have understanding in the business, and therefore they had rather I had written more darkly. But the unskilfull and ignorant do judge that I have plaid the Sophister in Writing, because they hit not the mark.

But all their judgments and Censures mought be tolerated whatever they be that they pass upon my Writings, did they not by reason of their ignorance, contemn the good things themselves, and say of such things as are most true, that they are Fallacies and Lies: but this needs not seem strange to any, forasmuch as such wicked contemnings proceed from those that by reason of ignorance and blockishness do no better understand the business. But this is plainly diabolical, to be highly benefited by any one, and to be made partaker of such great secrets, and yet afterwards impudently to deny the same and say, that they never had any good thing conferred upon them. The detestable malice and impiety of these Men hath enforced me to manifest in this Appendix, so many excellent secrets, which I would at no time have laid open, had I not been so treacherously deceived by those perfidious Men.

This is the Letter written unto me, of which I made some mention even now.

" THOU hast written too clearly, and again too " manifestly; beware lest God stir not up " against thee another new Farnerian Devil, to punish " thy easiness [or forwardness] of publishing such " Mysteries. For they are not to be profaned by " the ungodly, let not the present corruption of " Men deceive thee, and that blindness [of theirs] " which for the most part ariseth therefrom; for all " wicked Men are not blind, I know many Farners " that are defiled with all kinds of Evil, and yet " are not all of them so blinded as thy Farner is. " Nay, their Wit is so penetrative and so clear-sighted, that should they but read the divine Books " that thou hast published there would not be a secret in all nature, but they would know it; nay " more, they would in a short time perfect that Philosophick Work. Which should it so come to pass, " (the more's the grief) what a many Slaughters, " what Whoredoms, how many ruinings! And what " evils of all sorts would break in upon mankind; of " the which, thou thy self (though innocent) would'st " be the cause. I know that the detestable Calumnies of the impious Farner enforced thee to publish them, for he every where reported and to all, " that thou wert ignorant of them. But my most " dear Sir, what is your knowledge as a thing of nothing, unless another likewise knows that you " know it? God knows that thou knowest, for he " gave thee thy knowledge. Thine own conscience " also knows it. What? Cannot these two most plenarily bless or make a Wise Man happy? The pleasure " that depends on the Opinion of Men is unhappy. In

" vain do we ſeek after true Felicity without us, if " ſo be its ſolid principle or foundation ſhould be " within us. What matters it, if Men think thee to " be leſs learned than thou art, as long as the very " light it ſelf of nature ſhines unto thee? I would to " God that I could once accompliſh that, which, by " thy divine Books it is moſt certainly manifeſt unto " me, thou haſt perfected, and let all Men believe " me to be a moſt ſtupid Fellow; I wiſh not thus, " as if I did at all doubt of the truth of any Work. " For though I ſhould have perfected the whole " work an hundred times, I could ſcarce be more " certain of the truth thereof [than now.] He that " knows the way of concentrating Fire, and of uni- " ting the terreſtrial Sun to this concentrated Fire, " and the *Arcana's* of Fermentations doubts not, nor " ſeeks after any thing more. I may boldly ſay, " that ſeeing nature doth perform whatever ſhe has " a mind unto, by theſe three, it muſt neceſſarily " be, that it ſhould do ſome moſt eminent thing. " But if I could but once have finiſhed the Work it " ſelf amidſt thoſe thouſand of buſineſſes that have " hitherto withheld me, and kept me off from the " Operation, I ſhould have been long ago able to " wind my ſelf out of the intricacies of this preſent " Age, and wholly devoted my ſelf unto God, and " to the moſt holy Philoſophy. I beſeech thee there- " fore my [dear] Maſter, and entreat thee by God " and by the moſt laudable charity thou oweſt " thy Neighbours, to write more obſcurely for the " time to come, nay, and if it may be, to wrap " over the Books thou haſt already publiſhed with " ſome new cloudings, leſt that celeſtial treaſure " fall into the hands of the unworthy, and ſo be- " come hurtfull to pious Men. Pardon Sir the li- " berty of my complaint, for there is no other " cauſe thereof ſave piety to God, and a Zeal to the " moſt Learned, moſt upright Man, and one that " too well deſerves from ungratefull mankind. And " albeit thou knoweſt not me, yet canſt thou not be " unknown to the Curious, ſeeing thou haſt Written " ſuch wonderfull things. Nor can there be any " one that ſhall but once have read over thy Books, " but he will be highly obliged unto thee, if he has " but any light of Juſtice [or Righteouſneſs] re- " maining in him, *&c.*

Many ſuch like Letters as theſe, have been oft-times ſent me from learned and skilfull Men, tending to this end, to warn me not to publiſh ſuch excellent ſecrets for the time to come. Yet nevertheleſs, amongſt thoſe that are rendred partaker of ſuch, there are ſome who (although the Operation it ſelf has been ſometimes manually ſhowed them very perſpicuouſly and clearly,) are notwithſtanding ſo ſottiſh and ignorant, as that they cannot imitate the aforeſhown Operation. But ſome there are alſo that are come to ſuch an heighth of Treachery, as that (being either ſeduced by their own falſe malice, or drawn away with the deſire of profit,) they deny even the truth, certainty and ſtability of that very thing themſelves have manually experienced, and dare to ſay it is falſe, this verily is an aſtoniſhing and deteſtably malicious wickedneſs, and juſtly and deſervedly gives every one an occaſion to ſhun ſuch deviliſh Men more than a Dog or Snake.

I *Glauber* may juſtly and deſervedly be compared with a burning Candle, by ſerving others, am I conſumed; have not I by the publiſhing ſuch very excellent Writings kindled a clear and new light to the whole World, and added and conſumed mine own peculiar Oil, and that in vain too, as reaping no recompence proceeding from a gratefull mind?

An Explanation of ſome obſcure places which are to be met withall in the Third and Fourth Part of the Proſperity of Germany, *and in the firſt Century.*

In the Third Part of the Proſperity of *Germany.*

IN the Operation which teacheth to extract Gold and Silver with profit, out of all Oars or Metallick Earths, in Page 360, A. *ſignifies* Lapis Calaminaris.

Page 361. A. *is once met withall there, and ſignifies the ſame* Lapis Calaminaris.

In Page 370, *the ſame Letter* A, *once put, ſignifies the ſame* Lapis Calaminaris.

In Page 370. b. *where we treat of the Waters uſed about Waſhing or Edulcoration, and ſhow their uſe, the Letter* B *ſignifies pieces of Cloth, and the Letter* C. *the ſhells of Eggs, and all Cockle-ſhells and Muſcle-ſhells, [or Shell-fiſh] of all kinds, in the water and out of the water: but the Letter* D. *denotes the Feces or Lees of Wine.*

In the ſame Page, the Letter E. *ſhows or ſignifies Egg-ſhells, and the Shells of all Shell-fiſh.*

The Letter F. *ſignifies Stones and Lime.*

In Page 371. a. *the Letter* G. *ſignifies Oil of Vitriol.*

In the Fourth Part of the Proſperity of *Germany.*

In Page 397. b. *the Letter* A. *ſignifies one part, and* B. *three parts.*

In Page 398. a. *by the firſt* X. *is underſtood* Alkalies, *and by the other* X. *is meant a fixt Salt, helping on Liquefaction or Fuſion.*

Here follow ſome profitable Operations, and which appertain to the Extraction of Metallick Earths; they are indeed treated of, or publiſhed in the firſt Century; but becauſe of the omitting of ſome words, they are hard to be underſtood: which, foraſmuch as they compriſe the things that primarily concern the Extraction of Gold and Silver, it ſeemed to me a matter worth the while to inſert the ſame in this Appendix, the which (as I hope) will not be unacceptable to thoſe that ſearch after ſuch great Secrets.

31. *By what means volatile Gold is to be compendiouſly extracted by the moiſt way, out of coloured Flints, red Talk, Granates, Sand, Clay, and ſuch-like Oars or Minerals, and made corporeal.*

FIrſt of all, ſuch Minerals are to be heated red-hot in the Fire, and be quenched, then ground with Mill-ſtones, and are to be put in Stone-Pots, or *Waldenburg*-Pots, or *Colein*-Pots, that in them they may be moiſtned with pouring *Aqua Regia* thereupon. Theſe Pots you muſt put Coals about, and heat them well. The Minera's being together with the *Aqua Regia* well heated, there muſt be poured thereupon ſo much Common warm water, as will ſuffice to waſh off the *Aqua Regia*. Being on this wiſe

wise moistned, they are to be put into great Pots made of good Potters Earth, having a many little holes in the bottom, over which is some Cap-paper to be spread, that nothing of the Oars fall out through the holes, but the water onely may distill down. After that all the first water is run out, you must pour on more hot water, and these pourings on are to be so often repeated, till the water tasts on more saltish, for then it has carried off with it the *Aqua Regia* that contained the Gold in it.

N. B. The Pots are to be set upon a Bench or Dresser that hath holes in it, so that the [Waters] may pass through the bottoms by the holes, and Vessels may be set there-under.

N. B. The Minerals may also be put in Barrels, having a double bottom, such as those Barrels are in which they use to wash out the Salt-peter with Common water out of the Earth. And now after the same manner are the pourings on of Common water to be so long continued till there is no more saltishness perceived.

N. B. Albeit that there is no more tast of saltness discernable, yet nevertheless some of the Salt doth as yet abide with them, [*viz.* with the Oars] and which is to be turned into Salt-peter, on this wise following.

32. *How good Salt-peter is to be made with profit even out of these Oars.*

MIX these Minera's that are thus deprived of their Gold with an equal weight of *Calx-vive* and Wood-ashes, then heap them up in a heap under some Shed or Pent-house, and moisten them for half a year, or for an whole year by repeated pourings on, of either Man's pis or Beasts, as often as (after the drying up of the moisture) need requires. In want of Pis you may use Common water. By this means the *Aqua Regia*, which was not thoroughly washt off with the warm water, and so remained behind in the Oars, will, by the assistance of Urine, or even of Rain-water, convert the Salt in the *Calx-vive* into good Salt-peter, which is to be washt off like other Salt-peters, and be reduced into Stria's or Crystals. The remaining matter being freed of the Salt peter by washing it off, may be again put under the same Shed or Roof, to keep off the Rain, and be exposed to the Air and Solar heat, and be moistned with Urine, and it will in its season again yield Salt-peter, and will even keep doing the same for many following years, if it be dealt withall on the like manner. And so even the very *Aqua Fortis* it self, which remained behind in the Oars, will bring its benefit. The reason of this manner of Salt-peter making is this, because the *Aqua Fortis*, or Spirit of Nitre, is as it were the seed of Salt-peter, and is of this nature, *viz.* when it is put among other Salts, (like as when some Vegetable seed is sown in the Earth,) it augments it self thereby, and is multiplied, even as the Seeds of Herbs are wont to doe. And haply, hence came that old Proverb, of *sowing Salt*, which the unskilfull and ignorant mock at, saying, How can it be possibly done, that Salt should be sown and multiplied, seeing the Rain can dissolve it and wash it away? These fooliish ones did not know either what Salt was to be sown, or how. Evident it is, that even this is the sentence and opinion of the ancient Philosophers, that even Salt may be sown and multiplied in the manner of Vegetables.

N. B. Out of the extracted Oars or Minerals being conjoyned with *Calx-vive* and Wood-ashes, may Salt-peter be made, in a few days space, by moistning the matters with pouring on, even barely Common water, and so drying it up again: but then there will not be such a quantity, as when more continued and more frequent pourings on of Urine have preceded.

N. B. It is likewise a thing possible to be done, to make good Salt-peter even in one days space, with the Waters used about the Edulcoration [or washing of the Oars] if they be poured upon *Calx-vive* so long till all the noise [or tissing ceaseth] which is made in the Solution. And thus out of the sharp water of Salt-peter, and the fix Salt in the *Calx-vive* is presently generated Salt-peter, shooting into long and delicate Crystals, after that the superfluous moisture shall have been thence drawn off in a Copper-pan. The remaining Salt-peter water must be again boiled in a Copper even to the appearance of a thin skin, and then be set in the cold to shoot more Salt-peter; these Labours are you to go on withall untill all the Salt-peter be boil'd out.

I think now that I have written and delivered all things perspicuously and clearly: He that cannot comprehend them, must even let them alone as an Ass must the Harp.

As concerning the sharp Waters which are used about the Extracting of Gold out of the Minerals or Oars, so as the Gold may not be lost that is in them, but be conserved, and that with profit, there are several ways that offer themselves, amongst which we have thought good to produce these following.

33. *The ways of Reducing volatile and fixt Gold unto a body, out of the Edulcorating Waters (so called) with which the Gold aforesaid hath been Extracted out of the Oars; and also of usefully or profitably improving the said already used Waters themselves.*

HE that desireth to enter upon the best way, may pour into the Solution of the Gold, or into the Water containing the dissolved Gold, a Solution of Silver or Lead, and in such a quantity as he shall guess the Gold is of, that is dissolved in the Water. As for Example.

Suppose there be two or three Lots [Lotones or half Ounces] of Gold in the water, there must then likewise be dissolved so many Lots of Silver or Lead in *Aqua Fortis*, or thereabouts; which Solution is to be (be it more or less) put to the said water, and to be well mixt by a strong shaking it to and fro, till it becomes like Milk. When it shall have settled, it must be shaken again, and those strong agitations must be several times repeated in an hours space. Then all being well settled, the clear water is to be poured off, and the grosser matter is to be put in a Filter, that so all the humidity may by distillation [or filtration] be removed from the dissolved *Lune*, or dissolved Lead, and the Metals themselves may afterwards by reduction be reduced into their pristine body, by such an help as we will presently teach

N. B. If the Silver or the Lead should not have extracted all the Gold out of the Water, or drawn it to themselves, which may easily happen, yet notwithstanding there is not any loss of the same. For, because the *Aqua Regia* being debilitated by pouring plenty of water thereupon is rendred unfit to extract any Oar anew, there may be poured into that edulcorating Water out of which the Gold is already drawn by the Solution of Silver or Lead, a sharp [or strong]

ſtrong] *Lixivium* made of Wood-aſhes and *Calx-vive*, and rendred a little ſharper by a little Liquor of Flints. For the Flints doe precipitate all the Gold out of the Solutions. And now the *Aqua Regia* being kill'd by the *Lixivium*, lets fall every Metal that it has in it, whether it be onely Gold, or Copper, or Iron, in the form of a yellow Powder: This Powder is to be dried, and to be reduced after that manner which I told you but now, that I would teach.

The ſame Gold may likewiſe be gotten out of the *Aqua Regia* (firſt debilitated by Common water) very commodiouſly by a Solution of Mercury or Quickſilver put thereinto; The Mercury abides in the *Aqua Regia*, and the Gold falls to the bottom like a tender fine Powder, which being waſht and made corporeal by reduction will be 24 Carracts fine. And as for getting the Mercury out of the *Aqua Regia*, it is not to be better done than by pouring thereinto a ſharp *Lixivium*, by which the Mercury is conſtrained to fall down to the bottom like a yellow Powder, which is profitable for ſuch-like precipitations. The *Aqua Regia* and the *Lixivium* ſerve for to make Salt peter withall.

The Edulcorating-water out of which all the Metals are already reduced [or precipitated] being boil'd in Coppers, till a skin appear at top, and then pour'd out into other Coppers or wooden Veſſels, yield excellent Salt-peter, fit for the diſtillation of *Aqua Fortis* for a new Operation. He that is skill'd in managing this work, will get as much Salt-peter as will pay the coſts of the *Aqua Fortis*; inſomuch, that the Gold is extracted without any coſts. For five or ſix pound of *Aqua Fortis*, which holds in it two or three pound of diſſolved Salt, and is precipitated with a ſharp *Lixivium* of *Calx-vive* yields about ſome ten pounds of Salt-peter: and this will certainly anſwer the price of the Water or *Aqua Fortis*; and ſo you will have Gold extracted out of the Stones without expence or charges.

34. *Another and better way of getting out the Gold that is Extracted out of the Oars, out of the* Aqua Fortis.

MAke, by Calcination, ſome Aſhes, of one part of Tin, and four parts of Lead, and put them in an Iron-pot, whereto pour the extracted Gold, or the *Aqua Fortis* containing the Gold, boil it and continually ſtir the Calx with an Iron rod, that ſo all the ſharp Spirits may cleave to the Lead and Tin aſhes, and the Phlegm onely may exhale. After that the ſaid Calx of the Metals hath concentrated all the Spirits, and is become wholly dry, let it be taken out, and be caſt upon Coals in a ſecret Melting-pot or Crucible, in which operation the fire forceth out all the Spirits into the Recipient, which are to be again made uſe of for new Extractions. The volatile Gold, and which is mixt with Iron, adheres to the Calx of the Metals, and is to be reduced in the Furnace which the *Germans* call *Stichofen*; whereby the Lead impregnated with the Gold, and exalted by it, is gotten, which by ſeparation yields the Gold and Silver.

N. B. If that Lead ſhould not contain Gold enough as to be worth the while of ſeparating it on the Cupel [or Teſt] it is to be again commixt with Tin, and be reduced into Aſhes, and by this Calx are new Extractions to be Concentrated, that ſo by the ſo many repeated Labours, the Lead is at length made rich enough, and yields (by ſeparation) a good portion of Gold and Silver.

If (in the ſeparating) the matter be turned by the blaſt of Bellows into Litharge, it is not needfull to melt ſuch a deal of Lead on the Teſts, which would require ſo much fire. But however, it is a thing feaſable for the Gold to be gotten out of [or by] the Teſts without melting, which ſhall be taught afterwards.

35. *How an* Aqua Regia *is eaſily acquired for the Extraction of Stones.*

FOraſmuch as Spirit of Salt may be had in great quantity, you need onely diſſolve ſome Salt-peter therein, and this Solution is to be uſed to extract the Minerals withall. For the Spirit of Salt being made ſtronger by the Salt-peter, doth readily and willingly ſeize upon the tender Gold that is in the Stones. And as for the Spirit of Salt, it may be uſed as it comes over in the firſt diſtillation without any rectification.

36. *An eaſier way of getting an* Aqua Regia *uſefull for extraction.*

Becauſe that theſe Operations do always bring forth Silver impregnated with Gold, and that *Aqua Fortis* is requiſite to make the Separation of them; the Solution of Silver may be uſed, and ſo the labour of the aforeſaid incineration be omitted. Into the *Aqua Regia* wherewith you have extracted the Gold, pour in a Solution of Silver, and it will fiſh out the greateſt part of the Gold out of the *Aq. Reg.* and is, [*viz.* the *Aq. Reg.*] to be afterwards made uſe of to a new extraction, and be again diveſted of its extracted Gold by a Solution of Silver. In want of a Solution of Silver. the extract is to be concentrated with the Aſhes of Lead, and you muſt proceed (by driving off the Spirit out of the Aſhes, and by reducing the ſame Aſhes in a Furnace,) after the ſame manner as we taught you but now in our foregoing directions.

N. B. You are here to note, that the *Aq. Fort.* which containeth in it the diſſolved Silver, and is poured into the *Aq. Reg.* or nitrous Spirit of Salt, doth add an encreaſe unto theſe ſame Waters. For the *Aq. Fort.* doth corroborate the Spirit of Salt far better than Salt-peter doth.

37. *How the Silver (wherewith the Gold has been ſeparated out of the* Aq. Regia) *is to be gotten [or reduced] out of its* Calx.

After that the Solution of the Silver being poured into the *Aqua Regia*, hath extracted the greateſt part of the Gold; the *Aqua Regia* is to be poured off clear from the Silver remaining in the bottom, and is to be uſed about new Extractions. But if ſo be it ſhould yet contain Iron in it, it muſt be concentrated by Lead-aſhes. The white Calx of Silver is to be put upon ſome Cloth over a glaſs or ſtone Veſſel, and ſo is to be freed from the remaining *Aqua Regia*, which will drop from it; and by pouring on of warm water, it muſt be altogether rid of the *Aqua Regia*, which as yet adheres thereunto. This done, your Linnen-cloth being ſtrong and three double, the Common water is to be ſqueezed ſtrongly thereout of, and the Calx it ſelf laid by, to dry; which may afterwards be reduced in the Secret Crucible, or be uſed about a Cementation of *Lapis Calaminaris* into Gold and Silver.

38 *How the said* Calx *of Silver is to be reduced without any loss of its weight, and without any Detriment.*

Forasmuch as this white *Calx* of Silver is made so very volatile by the Salts, as that it cannot be reduced at all in the common melting Pots or Crucibles without great Detriment, there is no way of preventing that loss more commodiously than this which follows.

Mix this silvery *Calx* with an equal weight of a *Sal Alkali*, and cast it into the secret red hot Crucible, wider at bottom and narrower at the top, the which you must cover with its Cover made of the Lute of Wisedom. By this means will the *Calx* melt, nor will it lose any thing by fume, nor will it penetrate into the melting Pot or Crucible: and so the Silver impregnated with the Gold will be conserved without hurt, which being granulated the Gold may be separated by *Aq. Fortis:* Now this very Solution of the Silver by the *Aq. Fortis*, may be again used to gather [or separate] more new extracted Gold, and so will afterwards produce the Silver to be reduced the same way we instructed thee, and so give thee a perpetual Separatory Operation of Gold and Silver, which may every where be exercised with a great deal of profit.

39 *Another way teaching to reduce fugacious Silver with greater profit.*

Put upon the Rudder of thy Silvery Ship, the little Fish called *Remora*, that so it may be freed from its speedy flight, and abide quiet. Melt thy said Ship together with the *Remora* that sits on the Rudder in the secret four-square melting Pot, in which melting together, there is not onely recovered all the Silver without any Detriment, but it doth also get an increase of its weight, out of the white Bristles or Fins of the little Fish, and becomes enriched with Gold by its Bloud: so that this Additament yields (in the Reduction) a greater quantity of better Silver than other Additaments do. But as concerning other Commodities or Benefits that this fugacious Silver bestows, it shall (God willing) be taught afterwards.

Thus much was I willing at present to teach and reveal, concerning the extracting of volatile Gold out of Stones and the poorer Oars, and of a successive graduating of Silver into Gold. There shall be more taught elsewhere.

40 *A gainfull extraction out of the poor Oars or Minera's of Silver and Copper, by the moist way.*

These Minerals or Oars are to be dealt with after the same way as we showed above about the Minera's of Gold, *viz.* they are to be heated red hot, quenched, and ground with Mill-stones, and be moistned with *Aqua Fortis*, and to be extracted after the like manner as the Oars or Minera's of Gold are, all the difference being onely in the Waters; for *Aqua Regis* is to be used to extract the Gold with, and *Aqua Fortis* for the extraction of the Silver. If therefore there be the Minera's of Gold and Silver at hand, the Gold is to be extracted by *Aqua Regis*, and the Silver by *Aqua Fortis*; and both the Solutions are to be mixt together, in which mixion the Silver precipitates to the bottom in the *Aqua Regis*, and withall fisheth out the Gold out of the *Aqua Regis*.

Neither is it here any impediment if the Oar of Silver should also contain Copper in it, which will be extracted together with the *Aqua Fortis*. For the Silver and Gold fall down to the bottom, and the Copper abides in the *Aqua Regia*, which is again fit to extract more Gold withall, and may indeed be used as many times as any one shall please. The Copper it self is extracted out of the *Aqua Regis* by Iron Plates, but they tinge the *Aqua Regis* with a yellow colour, and therefore make it altogether unfit for any farther labours of this kind. Better is it therefore to concentrate it upon the Ashes of Lead, that so that spiritual Iron in the *Aqua Regis*, may convert some of the Lead into Gold by Gradation, and the *Aqua Regis* it self having been so often used may be yet again used.

41 *Another far easier way of plentifully extracting Gold and Silver out of the poor Minera's or Oars, Sand and Clay, and the like Minerals without the Fire of melting.*

Fill a Glass Cucurbit, or one made of the best Earth, and excellently well luted a little more than half full, with the Minera, Sand, or Stones containing in them, fugitive and fix Gold, and hereupon pour as much of the following *Menstruum* as is sufficient to moisten them; then presently put on an Alembick (for assoon as ever the dissolving Water is poured on the Oars or Minera's, it presently works and fumes) and draw off therefrom (in Sand) all the humidity by Distillation: that so in the distilling the Gold it self may be dissolved, and the *Aqua Regis* it self may by Distillation be recovered; which is again profitable for a new Operation, as we shall tell you by and by. All the moisture being drawn off, let the Cucurbit cool in the Sand, and then take it out, and put in some Water, that the Minera's and Salt may be softned. Now extract very carefully and diligently, all the Salt out of the Oar, in which said Salt is the Gold that is extracted out of the Oars or Minera's, and boil it up into a red Salt, to which must be added some Litharge, and so must be molten in such Pots as will not break. The Litharge will imbibe all the Gold, which how it is to be separated from the Lead, we will presently teach in the following discourse.

42 *The preparation of the Water necessary to this extraction.*

For the extraction of Gold, Salt is to be dissolved in *Aqua Fortis*, and for the extraction of Silver, you must dissolve Salt-peter in *Aqua Fortis*. With these Waters, of which you may furnish your self with plenty without any great labour, moisten the Oars and then distill them off again from the said Oars, and they will be always fit for such like Operations, insomuch that you need never to make new Waters. Nay more, in all the several Operations and Extractions of the Oars, they will be more and more augmented, so that if thou usest but at first no more than two pounds of the same Waters, they may suffice thee for infinite extractions.

N. B. By this means, all the Gold, how little soever, may be extracted by thee out of all Flints, Sand, and other Minerals without any expences, the Fire onely excepted.

This alſo is expedient for me here to ſhow, that ſometimes there are to be found fugacious Minera's of Gold, and coloured Flints which are ſufficiently rich with Gold, and are painted as 'twere with delicate colours, *viz.* green, sky-colour, and red: but in the heating them red hot, thoſe colours vaniſh, and leave the Flints white. Such as theſe admit not of heating red hot, like as others do, which retain their colours in a red hot Fire. Therefore ſuch muſt be reduced into Powder without any previous heating red hot, and you muſt extract them [as they are] that ſo the volatile Gold may be attracted by the *Aqua Regis*, which ſaid Gold being abſtracted [again] by the Aſhes of Lead commits it ſelf to [or imbibes it ſelf in] the ſaid Aſhes, which are to be reduced by the help of the ſecret Crucible; in which Reduction, the Gold becomes corporeal and admits of being ſeparated from the Lead with profit.

N. B. Such Stones may likewiſe be mixed with the ſharp coagulated Spirits, and theſe [Spirits] may be forced over by a Retort: For ſo, the fugitive Spirits of the Salts carry over with them the Volatile Gold, and make a very excellent Gradatory-water, tranſmuting fugitive Mercury into Gold, with greater profit, than if this very volatile Gold had been made Corporeal with Lead.

This ſecret is none of the leaſt of thoſe which teach the Extraction of Gold out of colour'd Flints or Stones.

Such a volatile Gold may alſo paſs into other Metals by gentle Cementations, and ſo become fix, and will bring no ſmall profit, nay rather a greater benefit than if it were gotten out by fuſion. In ſuch Cementations, the volatile Gold hath time of getting a body with the other Metals, and of acquiring a fixity, and is as it were a golden Seed, which augments it ſelf into Gold, in, or out of the Metallick Earth.

43. *Another Water to Extract Gold and Silver withall.*

For Gold, let Salt; for Silver, let Salt-peter be diſſolved in the Water [or *Aqua Fortis*] and let be thereto added as much Oil of Vitriol as half the Salt is you put. This Water extracteth Gold and Silver out of the poor Minera's Sand and Stones, and requireth the ſame operation as the precedent ones doe. It is likewiſe augmented even to infinity, inſomuch, that Gold and Silver may be extracted out of the poor Mines without Coſts, if you except but the fire.

N. B. Oil of Sulphur does the ſame that Oil of Vitriol doth, and therefore may it ſerve inſtead thereof in ſuch Extractions of Gold and Silver.

44. *Another far eaſier way of plentifully Extracting Gold and Silver out of the poor Minera's or Oars, with very little or in a manner no Coſts at all.*

Mix the Oars or Minera's with their due Waters, and therewithall fill ſmall Pots or Crucibles made of the beſt Earth, which put near one another in a great Iron pot. Put an Alembick upon the Pot, and draw off the Spirits by diſtillation, which [Spirits] will requite all thy diſburſements, and will ſo give thee Gold *Gratis*, which you are to waſh out of the Oars with Water, and get it [or corporifie] by *Saturn*.

45. *Another yet eaſier way.*

Moiſten the Oars with their due Waters, caſt them in by little and little upon the live Coals, and that in ſuch a manner as we taught thee about diſtilling Spirit of Salt. By this Diſtillation the Spirits paſs into the receiving Veſſels, and the Gold and Silver are diſſolved and ſtay behind with the *Sal Mirabilis*, and is to be waſht out of the Oars with Water, and to be molten with *Saturn*. Thus is gotten the Gold and Silver that was in the Minera's or Oars, without any expences, and the Spirits quit all the Coſts.

46. *How Gold and Silver may plentifully be extracted out of Fat Clay.*

Although that the Extraction of Gold and Silver by moiſt waters is a ſordid operation, as was aforeſaid at the beginning, yet is it not done without profit; becauſe the Gold and Silver may be gotten out of the Waters by precipitation, and of the uſed Waters may Salt-peter be made. But now the caſe is far otherwiſe with fat Clay, for that, it being fat, the Spirits hide themſelves therein, that the one half thereof can hardly be recovered, unleſs ſuch an Earth be freed of its fatneſs by heating it red-hot: and this requires ſome labour to effect it.

But ſeeing that in all places of the World, whereſoever any Earth is, there is ſuch a kind of Earth, and that in no ſmall quantity, that contains Gold and Silver: and there hath not as yet been any body that hath endeavour'd to reduce it to any profit, and bring it into uſe, but eſpecially when it contains not in it ſo much Gold and Silver as to defray the charges of ſeparating it by Lead. But I have found out a very eaſie way of doing it with profit, and I think it my duty to diſcloſe that Artifice for the publick good; and it is thus:

Mix ſuch an Earth as contains therein Gold and Silver with the Water of Vitriol, which I have afore deſcribed, and make it up into balls ſomewhat bigger than ones fiſt, which throw orderly and by little and little into my firſt Furnace, or into my ſecond diſtillatory Furnace, and draw off the Spirit by Diſtillation. The diſſolved Gold and Silver remaining in the *Sal-Mirabilis* is to be extracted out of thoſe balls broken ſmall, with warm water, and to be reduced by Lead, after the afore deſcribed manner.

47. *By what Artifice Gold may be plentifully and eaſily extracted out of Granates, Agates, Saphires, Rubies, Sand, or other hard Minerals which ſuffer not themſelves to be tamed neither with Lead, nor with ſharp Waters.*

It is certain that all Granates, what Colour ſoever they are of, or what place ſoever you meet with them in, whether you have them out of Rivers, or waſh them out of Sand or fat Clay, or that you find them in the high Mountains and Rocks; they always contain in them much Gold: but by reaſon of their Glaſſy nature, they cannot by any means be extracted with *Aqua Fortis* or ſtrong Waters, nor can they by reaſon of the hardneſs of their bodies fuſion be molten with Lead. Hence it is, that as hitherto they have never been ſo handled as to have their Gold extracted out of them with profit, and therefore are they neglected as unprofitable, unworthy, abject, and contemptible Minerals, whereas notwithſtanding it is a thing feaſible for a man to enjoy their Gold and Silver with a little labour, and as it were without any trouble. But now what courſe muſt we take to doe this, ſeeing they elude the ſharpeſt powers

powers or efficacy of all strong or sharp Waters, whereby their heart may be penetrated, and Gold may be extracted out of their bowels? I answer; They are to be overcome by Concentrated Spirits, and which are reduced to the form of Salt, as also by a fusile Salt of Lead, and be so divested of the Gold they contain in them, and without this will the victory over them hardly be obtained. For Spirits being reduced to the form of Salt, doe abide the fire most patiently, and perform a double labour; one by their Acrimony, the other by a strong fire, insomuch that nothing can escape their power, and therefore all things are tamed and subdued by them, and doe afterwards readily obey the virtues or power of Saturnine Salt, and yield forth their Gold by fusion.

47. *A Demonstration, above the reach of any Confutation, shewing that more Gold and Silver may be gotten out of the Oars or Minera's of Gold and Silver, by the hitherto prescribed ways, by sharp Waters or Salts, and in a manner without Costs, than is wont to be done by many Expences, and by the fire of Melting.*

I believe it is not unknown to any one that is but a little acquainted with the knowledge of the Minera's of Gold, that the Gold cannot be gotten out of them without the addition of Lead, or the help of some matter rendring the fusion more easie. And now when such Oars contain but little Gold, and contrariwise much Lead, or matters requisite to promote fusion are of necessity to be thereto used, how can it be, that that little portion of Gold or Silver should recompence or defray such great expences? Therefore such poorer Oars have hitherto lain as cast-aways, as being uncapable of bearing the Expences of separation, and so are not put to any use, nor are at all profitable.

But admit that the Oars do contain as much Gold and Silver, as that the Costs of melting may be repaid by them; yet such a fusion, compared with this invention of mine of Extracting Gold and Silver with Waters and Salts, is as if you should compare Water with Wine, or the night with the most brightsome day, which have no comparison.

For, first of all, the common melting of Metals is accompanied with far greater Expences, than that Extraction of mine with Salts, which verily needs but a very little charge. Then farther, it can never be, that all the Gold should be so perfectly Extracted out of the Oars, but that some of the same will abide in the Scoria's; besides, the volatile Gold and Silver, which must necessarily be blown off by the vehement blast of the bellows, and the acuteness of the fire, and so be lost.

Now amongst all the conveniencies that arise from the Extracting of Gold and Silver out of the poor Mines, that is none of the meaneſt, *viz.* that not onely all the fix Gold and Silver are conserved by the Salts, but also the Volatile too, and this latter is made fix and constant in the fire, together with that former fixt part, whereas by the Fusing fire it is all of it lost.

N. B. For the Waters of the Salts doe make the volatile Spirits of Gold and Silver, and which otherwise would vanish away fix and constant; for by a strong blast and force of fire are they rendred yet more fugacious. Hence comes it to pass, that [there is but the] one half part of that Gold extracted by the fire of the usual way of melting, that the Waters of Salts get out of the Oars. Upon this account my Invention doth not onely yield this commodiousness as to get both the fix and volatile Gold and Silver together, without any detriment out of the Oars, but also gets not a little in sparing Coals, (not to mention this, that one man does more in the Extraction of Gold and Silver by Salts, than three men are wont to doe in the common way of Fusion.

By what hath now been said, it is evidently apparent, what a deal of benefit and profit this invention will bring in all places of *Germany*. For this Extraction may be used commodiously and profitably, not onely in all Minera's or Oars both rich and poor ones, but also may be used in Extracting the Gold and Silver out of all colour'd Flints, wherewith all Rivers, Brooks and Fields do abound.

But some or other may haply say here, by what means can it possibly be, that Gold and Silver should be extracted out of the Stones that lie too and agen every where in the Streets? I answer such, that indeed it is very rare to find fix Gold and Silver in such Stones, but yet they have in them a spiritual, unripe and volatile Gold, which is not onely made fix and constant in the extraction made by Salts, but it doth likewise turn some of the Lead it self that is added in the fusing and separating it into its own nature by Graduation. Hence 'tis evident, that in all places of the Terrestrial Globe wheresoever Stones are, good Gold and Silver may be gotten with profit, by a little labour and small costs. Praise and glory be eternally given to the most bountifull Lord God for such Inventions. *Amen.*

These are the Secrets which I publickly demonstrated and divulged [or communicated] in my Laboratory, for the benefit of my Countrey. And I do now again affirm and witness that if even the very bare Letter be observed, no body can err. And if so be that any one should change this or that order, and so think to better the Operations, and should err, let him not lay the fault upon me who have Written the naked truth, but let him blame himself.

I had several other things of no small moment, to have spoken to here at present, the which I shall God willing very suddenly dispatch in my second Century, for the present time does not permit it.

And in the said Century will I declare with a yet clearer and easier manifestation, those Secrets here disclosed, the which could not at present be done because of my too much hast.

And now I wish to all the pious Students after this so great an Art, a large and plenteous blessing from the mercifull Lord God, as to this so very excellent a Work, that the poverty and want of abundance of miserable People may be supplied in many places. Which if it be (as I hope it will) it will exalt the honour and glory of the most high, and will encrease the Prosperity of the Countrey, and withall will check and keep under the most base attempts of mine Enemies. But especially if the counsel that I have proposed in my first Century, (*viz.* that every one may have liberty to exercise such Operations,) takes place. This being granted, it cannot be, but that Gold and Silver and Copper will every where be gotten out of the Earth, with the help of these my Writings, to the great profit and benefit of all the whole Countrey.

And

And ſo I conclude this ſo much haſtned Appendix, wreſted from me occaſionally by perverſe Men. Thoſe things that I have not in ſuch or ſuch a place clearly and evidently enough expreſſed for want of time, I will expreſs God willing in my ſecond Century with a clearer Explanation, and thither do I refer the well-minded Reader.

The End of the Appendix.

THE

SIXTH and Laſt PART

OF THE

Proſperity of GERMANY.

In which the *Arcana's* already revealed in the Fifth Part are not onely illuſtrated with a clearer Elucidation; but alſo ſuch are manifeſted as are moſt highly neceſſary to be known for the Defence of the Country againſt the *Turks*: Together with an evident Demonſtration, adjoyned [ſhewing] That both a particular and univerſal Tranſmutation of the imperfect Metals into more perfect ones by Salt and Fire is moſt true; and withall, by what means any one that is endued with but a mean knowledge in managing the Fire, may experimentally try the truth hereof in four and twenty hours ſpace.

To the Friendly READER, Health.

I Taught in the Firſt Part how the over-abounding quantity of Wine and Corn is to be Concentrated, that it may abide uncorrupt for a very many years, and when neceſſity requires it may be an help to many in need.

In the Second, Third, Fourth and Fifth Parts I taught the Extraction of both fix and unfix Metals, to great profit, and almoſt without any Coſts, out of the bodies of vile, poor Minerals and Metallick Earths, which will not quit the Coſts of a Fuſing-fire, and this to be done by no coſtly Waters; and withall, how to bring them into uſe, which no body afore me ever did. And did not I diſburſe a great deal of Monies in building a convenient Laboratory, in which I produced ſuch moſt profitable things to the view of every one, and demonſtrated them to be true? And what have I reaped for theſe ſo great benefits I have done, but a moſt ungratefull caſting off their remembrance? Have not all the things I have taught been accuſed of falſity and deceit both to the high and low, by thoſe who have ſo audaciouſly dared to deny the Melioration of Metals by Fire and Salt? Theſe have alſo aſſerted, that the making of Salt-peter of Common Salt is altogether impoſſible; and they have affirmed it to be a thing quite contrary unto nature, that Metals ſhould be gotten out of the poorer ſort of Metallick Earths by the help of a Water made of Salt-peter; but yet that even this is moſt certainly true, the Appendix of my Fifth Part, and my Second Century, doe demonſtrate by indubitable Experiments.

And

And albeit that the three said Arcana's *are evidently enough delivered and described, so as even to be palpably felt by the hands of those that know how to manage the Fire, yet notwithstanding they have brought but very little benefit as yet, because that although they are most true, yet are they contemned and disregarded by unskilfull Men, out of meer Envy and most perverse hatred, and doe even yet stick in contempt.*

However, not regarding these [*base dealings*] *and that I may mete them all things in full measure, I have a mind yet farther to detect some secrets, by which there may redound to the Country very notable fruits: And that not onely by converting the many Metallick Earths that contain in them Gold and Silver, and which have not hitherto been profitable to any unto a gainfull and a beneficial use; but also by defending the Country against the most dangerous invasion of the* Turks, *who are the Capital Enemies of the whole Christian World, and that by so strong and efficacious a defence, as never any mortal man did yet contrive the like of.*

As to what belongs to Mineral Treasures, I have exhibited a sufficiently clear and manifest description of them in the second, third, fourth and fifth Part of the Prosperity of Germany, *and also in the Appendix to the fifth Part, and in the second Century. But yet there is nothing so perfect and absolute but that in process of time there may be added and adjoyned thereto some new thing, and somewhat of perfection: Witness my Instrument which I mentioned in the second Century, by the help of which, Gold, Silver and Copper are easily and plentifully extracted out of their Metallick Earths, and that on such wise, as that there are requisite no other Costs but the bare Charges of the fire. And farther, this way would bring no small profit even from those Metallick Earths which are ranked amongst the poorest sort of Oars; if it were well known, and exercised in many places, there would flow thencefrom most mighty profit throughout all* Germany, *and the said Instrument would by its assistance wonderfully promote the same.*

For although I have heretofore publisht several ways of preparing sharp Waters, and of extracting the Metals with them out of the poor Minerals; (and yet even these ways bring no despicable gain) yet they perform not that which is wont to be accomplished by the help of the said Instrument. For this Instrument serves not onely to extract those sharp Waters in a greater quantity, but is also far fitter and more convenient for the Extraction even of the Metals themselves out of their Earths, and for the separation of the Dissolving Menstruum *from the Metals, than those Glass Vessels are, which have been commonly used about this Operation.*

Therefore it much concerns him that employs himself about these kind of Operations, well and thoroughly to know its Use. I made indeed some mention of the same in my Second Century, but yet not so clearly as for any one thoroughly to understand its Use by what I there spake. Therefore I have thought it expedient to give here somewhat a clearer and more perspicuous description of the same, that so I may not seem to be at all wanting in my diligence unto any one, but may be said to have done all things with a due candour and openness.

The Description of the Instrument, serving for the plentifully preparing of Spirits, and for the easie extraction of Metals out of their Oars, without much Cost.

THis Instrument is to be made of good Earth, that can sustain both the Fire and the Spirits; Metals are unprofitable to make it with, because they doe not long resist the Corrosion of the Spirits: But now, that the said Instrument may the longer abide in the Fire, its outside superficies must be fenced with Iron bonds. This Earthen Vessel therefore must be made of such an Earth as abides the violence of the Fire, and resisteth the Corrosivity of the Spirits, so as that it breaks not nor chaps with too much heat, nor be corroded and eaten thorough by the Corroding Spirits. Such Earths there are enough of too and agen in *Germany*. Moreover, this said Instrument may be made greater or lesser, according as you are minded to prepare a greater or lesser quantity of Spirits; But however, it must not be made too big, for then (if it exceeds a due magnitude) it will not abide the fire so well. Therefore is it necessary to have several of these Instruments made, if a man be minded to make at one and the same time a great quantity of Spirits. But if any be minded to set about this Operation so as to have huge quantities of Spirits, it will be his best way to have his Instrument made of Iron plates, such as the Armourers use, and to strengthen them with Iron rods, and so fence it both in the inside and on the outside every-where with Lute or strong Clay. For by this means the Instrument being made of a sufficient bigness for the work you would put it to, will in its inward superficies hold the Corroding Spirits, and in its outward superficies undergo the violence of the fire without detriment, and be far more commodious than so many little Instruments that are made onely of Earth.

Of the Form and Figure of this Instrument.

THE matters out of which the sharp Spirits are to be drawn, are not to be put nakedly in [as I may say] into the Instrument it self, but are to be put in some strong Earthen-pots and so put in, that after the Spirits are distilled off they may be again taken forth, and other Pots fill'd with new matter may be put in, in their room; and this to be so often done as need requires.

And seeing the Salts that are to be distilled are not put naked into the Instrument, but are put in, in Earthen-pots; the Instrument must necessarily be so prepared, as that those Pots may be put in as often as need is, and be again taken forth, when the

Diſtillation is done, and new ones be put in, in their ſtead.

The Inſtrument therefore muſt be of a like bigneſs both above and below, and 'tis no matter to have it much exceed the heighth of your Pots you put in.

One ſide of it muſt have a Door to put in the Pots at, and to take them out again, the which Door muſt be made to ſhut handſomly after your putting in and taking forth.

To the other ſide muſt be fitted a Pipe ſomewhat large, by which the Spirits may have a paſſage forth into the Receiver. And the Inſtrument muſt be on ſuch wiſe placed in the Furnace, as that the Door and Pipe may lie without the ſaid Furnace. To the Pipe muſt be added another Leaden Pipe, twining round like a Serpent, and therefore is by the Chymiſts called a Serpent [or a Worm:] the which muſt be ſet in a Veſſel full of Water, that ſo the Spirits paſſing out may be cooled and be caught in the Recipient.

Of the uſe of the Inſtrument.

WHEN you will diſtill your Spirits, you muſt put thereinto ſo many Pots filled with your prepared Salts as your Inſtrument can hold, then cloſe the Door well, and put Fire in the Furnace. This done, the Spirits will aſcend out of the Pots thus heated in the Inſtrument, and finding no other out-let but by the Pipe and Worm, they will enter into them, and being there cooled will run down into the Receiver. You ſhall know if all the Spirits are forced out of the Salts or not, when they ceaſe to flow out through the Worm into the Recipient. Which when you ſhall perceive, you muſt open your Door and take out the Pots in order, and then put in new, that ſo the Diſtillation may be continued on without any delaying. But now, thoſe Pots that are to be put a new into the Inſtrument, muſt be ſet nigh the Furnace a while, that they may grow hot: for elſe being put in cold, they would not brook the ſudden heat, but chap and break. When all the Spirits are diſtilled off, then you may put in other new Pots in the room of them you took out, and the Operation is to be ſo long and ſo often repeated as need ſhall require, or as any one has a mind to do. The Salts that remain behind in the Pots you take out, are to be moiſtned and macerated with ſome Phlegm or weak Spirit, and they do again, ſometimes emit Spirits by Diſtillation, but yet not in ſuch quantity as at firſt they did.

This is that way of preparing ſharp Waters uſefull for the extractions of Copper and Gold. But as for *Aqua Fortis* requiſite for the extracting of Silver, it cannot be prepared by this ſame Inſtrument, becauſe it will corrode the Worm or Leaden Pipe, if it ſhould paſs through it, which the Spirit of Salt and *Aqua Regis* do not do.

N. B. When therefore you would make an *Aq. Fortis*, you muſt make you another twining Pipe or Worm of ſome other Metal which will not be preyed on by the *Aqua Fortis*, or elſe ſet ſome other Stone Veſſels to the Noſe of the Pipe that goes out of the Furnace.

It is alſo a thing poſſible to be done, to make ſuch ſtrong *Acetum* of Corn and Honey by the addition of ſome Salts, as that it ſhall not onely extract Gold and Silver, but alſo Copper and Lead out of metallick Veins or Earths.

Thus much may at preſent ſuffice to be ſpoken concerning the preparation of ſharp Waters needfull for the extraction of Metals out of the Oars. The preparation [or Operation] it ſelf follows.

How Metals are to be extracted out of their Earths or Oars, by the help of this Inſtrument.

THE preparing or fitting of the Minera's or metallick Earths for extraction, hath been deſcribed in the Appendix of the fifth part, and therefore needs not be repeated here.

But as we there ſhowed, that the roaſted [or calcined] and powdered Oars were to be put into Glaſs or Stone Cucurbits, that ſo they might be moiſtned with the ſharp Waters, and be macerated [ſetting the Cucurbits] in warm Sand; ſo the very ſame thing is to be done here, this onely excepted, that [*viz.*] the earthen Pots ſupply the place of Glaſs and Stone Cucurbits, and the Inſtrument it ſelf in which the extraction is made, performs the office of Sand: After the extraction, the Water impregnated with the extracted Metals is poured off, and the remaining matter it ſelf is waſht by pouring common Water thereupon, after ſuch a manner as hath been preſcribed in the Appendix of the fifth part.

By What means the Metals extracted by the diſſolving Water out of the Oars are to be ſeparated from that ſame ſharp Water without any Detriment, nay rather with an augmentation of the ſaid Water.

WE have taught in the Appendix of the fifth part, that if a Man be not minded to precipitate the Metals out of the Solution by the contraries, *viz.* by Alkalizate Liquors, then there is no commodiouſer and nearer way than that which ſeparates the diſſolving Water from the extracted Metal, by Diſtillation in Glaſs or earthen Veſſels.

If now any one is minded to encreaſe his diſſolving Water in this ſeparation he may be Maſter of his deſire by adding thereto common Salt, and drawing off the Water from it, which ſaid Water will by this means be encreaſed and rendred ſtronger. And now there will come no inconvenience to the Metals themſelves that are held up in that Water, in that ſome Salt remains with them, (no,) for in the reducing them, the ſaid Salt gets them an eaſier and readier Fuſion and Flux.

But yet it is not neceſſary to leave the Salt with the Metals, ſeeing it is better to ſeparate it from the Metals with common Water, and ſo uſe it again to the ſame labours rather than let it be loſt in the melting.

The Reduction of the Metals from which the diſſolving Water is ſeparated.

ALbeit that that Reduction hath been already deſcribed in my ſecond Century, yet I thought it worth while here again to repeat the ſame in a few words.

It is to be done two manner of ways, and that partly in Crucibles, and partly in the melting Furnace which the *Germans* call *Stichofen*. The pure Metals, as the Gold and Silver are wont to be molten and reduced in Crucibles: the Copper may be reduced in the ſaid Furnace, and needs nothing to be added about its Reduction. But for the reducing of Gold and Silver, fix Salts, the Glaſs of Lead, Borax

rax and other additions of that kind, (of which we have made mention in the ſecond Century) may be made uſe of. And as touching the addition of thoſe matters which are wont to be uſed to promote the eaſier Fuſion, this is primarily to be regarded, whether or no the Metals are pure and alone [by themſelves] or elſe have other Metals mixt with them, that (ſo acordingly) convenient additions may be applied. For if the Gold ſhould alſo have Copper or Iron in it, then there cannot be any better thing added than Antimony, which reduceth the Gold by one and the ſame labour [or Operation] and alſo ſeparates the Copper and Iron therefrom, which thing, other ſuch like matters that are uſed to make the Fuſion the eaſier, do not perform. Therefore it is neceſſary that he who would ſet himſelf about ſuch Operations, do well underſtand the Artifice of a metallick Fuſion, and ſo adminiſter or order his labours by adding or taking from, according as the ſubject requires and as is beſt. It is impoſſible to preſcribe ſuch things to any one in ſuch a manner as to make him preſently underſtand, learn, and imitate the ſame.

Some other manual Operations which are needfull to be known in the uſe of this Inſtrument and which may be exerciſed.

FIrſt of all, it would be no ſmall or mean *Compendium*, [or good Contrivance] if this ſame Inſtrument were compoſed of two or three parts, taking for the lowermoſt part a broad Iron Pot, and ſo to ſet on the upper part with its Door and Pipe thereto annexed. And becauſe the bottoms of the Iron Pots do a little bow rounding, and that yet notwithſtanding the Pots you put therein may not ſtand leaning or awry, the bottom is to be made level with calcined Allum, that ſo the Pots put in upon that may ſtand upright. From hence likewiſe ariſeth this Commodity too, that if your Pots ſhould chance to break, and the diſſolvent run out, it would not be ſo loſt but would lodge it ſelf in the burnt Allum, and may eaſily be recovered in the preparation of the ſharp Waters and be applied to uſe.

Secondly, the Inſtrument may likewiſe be ſo prepared, as that the Pots may be put thereinto by taking off the upper part, and then the Pots being put in, the upper part muſt be adjoyned again to the nether part, and [ſo] be again covered with its Cover; for being thus, there needs not the Door in the ſide to put the Pots in by.

N. B. There muſt be ſome Notch or Channel likewiſe fitted to the top of that upper part, which being filled with Sand may receive in it the Cover, and ſo prevent the out-let of the Spirits that way, by means of its tight ſhutting; as we have taught in the ſecond part of the Furnaces. The Inſtrument prepared on this wiſe, will haply be more commodious to many Men, than if it had a Hole or Door in the ſide. But every Man may chooſe either this or the other way, which he pleaſeth.

Thus have I now taught, and opened the uſe of my more ſecret way of eaſily preparing the ſharp Spirits of Salts in great quantity, and the manner of dealing about the Extraction of Metals out of the poorer metallick Earths: Away (I ſay) moſt eaſie to do ſuch great things, and which was never as yet known unto the World.

But yet I doubt not but that the Metals will for the time to come be plentifully and very profitably extracted (and ſo applied to common uſe) by the help of this Artifice and Inſtrument, out of the poorer *Minera's* which contain in them Gold, Silver, and Copper, and which will not quit the coſts of the Fire; and foraſmuch as by the help of this Inſtrument, the ſharp Spirits of Salts may be gotten eaſily and in large quantity, not onely for the Extraction of the Minerals, but alſo for the concentrating of moiſt Fires, and ſeeing that wonderfull things may be done by the help of thoſe Fires; I do therefore commend it to the Studious of Art, as a thing of better eſteem than ordinary, and have ſufficient reaſon of ſo doing. For to omit the ſaying, that thoſe cold Fires do give an excellent Magnet for Water or Ice, they do alſo abound with ſuch virtue as by which they can ripen and better the Metals; the which we will make a larger deſcription of, in what follows.

Beſides too, there may haply be effected far greater matters with thoſe cold Fires, as to the defence of the Countrey againſt the *Turk*, that Capital and Bloud-thirſty Tyrant and Enemy of the Chriſtians, in ſome caſes than with Gun-powder: if ſuch moiſt Fires be caſt into places a prety diſtance off by ſuitable Inſtruments, or be forced out of thoſe leſſer and greater Guns and War-like Canes, they will bring far greater Detriment to the Enemies than Gun-powder is want to do.

By this means, one weak Woman will in ſome caſes be able to repel many armed Men; but this is a thing which ſuch Men as are unskilfull in natural affairs, will deny till it be made manifeſt, and uſed againſt the *Turk*. Therefore I have a mind to ſet aſide all other buſineſſes, and to make thoſe kinds of admirable Fires to the utmoſt of my power in great quantity, foraſmuch as I well and aſſuredly know how great Detriment may be brought upon the *Turks* by the help thereof.

Fires they are which any one may carry about with him like Waters; they will not burn or overthrow Horſe and Man ſooner than any have a mind they ſhall. Nay yet more, if any has a mind to fortifie their Virtues, he may by adding other Fire-breathing matters, make them far more vehement and efficacious, and do far greater matters with them as being much more hurtfull than with thoſe ſimple Fires.

And now ſeeing I have ſo very much commended the concentrated Fires of Salts, to

1. Diligent and provident Maſters of Families, thereby to take away the ſuperfluous watrineſs from their ſmaller Wines, Ales, and other Drinks, and ſo to concentrate them, and carry them (in caſe of neceſſity) into the ſtrong and fenced Cities;

2. To the poor Chymiſts, that they might by them correct and better the Metals and ſo help their own poverty and want:

3. And to the Chriſtian Chieftains of War, and faithfull Rulers of the Countrey, that they may ſtoutly reſiſt the *Turks*, that are the ſworn Enemies of the Chriſtians.

I judge it altogether neceſſary to treat of them ſomewhat more clearly.

By what means and way this threefold uſe of cold Salts may be moſt profitable to the Countrey.

FIrſt of all, the concentrated Spirits of Salt may bring moſt great advantage, by concentrating the poorer ſort of Wines, the which they make better,

ter, as is ſhown in the ſecond Century: when the ſuperfluous Water is removed from them, inſomuch that they do not onely keep their goodneſs conſtant and durable, but may likewiſe be far more commodiouſly and eaſily tranſported out of one place into another, ſo that neceſſity requiring, they may be more eaſily tranſported out of ſuch places as are more remote from Cities and fenced places into the ſtronger holds and fenced Cities, and ſo be conſerved.

It is as yet freſh in every ones Memory how miſerably the caſe ſtood with Men in the foregoing War, which laſted thirty years. If any Farmer had his Cellars full of Wines, and the Soldiers break in to the Countrey, did horribly abuſe the gifts of God, that which they could not conſume by their deteſtable Gluttony, they wickedly ſpilled upon the ground; the Soldiers I ſay, and ſuch Men as profeſt themſelves Chriſtians, and durſt boaſt of the Chriſtian Religion. From hence may it eaſily be conjectured what it would be, if ſuch a multitude of *Turks* ſhould over-run our Countrey, which imminent evil, God of his mercy turn away from us.

In the days of *Noah*, the Men then lived in all ſecurity, and not at all regarded the Preachings and Admonititions of that godly Man, by which he exhorted them unto Repentance for 120 years together, they did Eat, they Drank, Married and gave in Marriage, till the Floud ſwept them all away, and there was no more room for Repentance left, as ſacred Writ teſtifies.

We reade of *Sodom* and *Gomorra*, that the Inhabitants of thoſe Cities being even drown'd in Leachery, did ſo deſpiſe the reproofs and warnings of the godly Man *Lot*, untill a Fire was ſent upon them from the wrath of God and conſumed them.

Who is there that in this Seaſon feareth God, and lives piouſly? He that is the ſtrongeſt oppreſſeth the weaker, nor does at all think on this, that there is one far more powerfull than he himſelf is, who comes when he pleaſeth, and puniſheth ſuch powerfull Oppreſſours. But theſe things, and ſuch warnings of this nature are plainly mockt at.

Did not God ſufficiently enough warn us the laſt year 1660, and ſhewed unto us his wrath, by thoſe dreadfull Tempeſts and Storms, and Earthquakes, wherewith almoſt all *Europe* trembled. Doth he not alſo this very preſent year (1662) ſhew us his ſelf-ſame diſpleaſure? What portends that Comet that was ſeen in the Heaven, any one may eaſily gueſs what it means. Verily it threatens nothing elſe but evil, eſpecially becauſe it extended its Tail contrary to the uſual wont of other Comets, towards the upper part of the Heaven, juſt as if it ſhould ſay, I will ſhow unto the Men, that 'tis not this or that Countrey, this or that Enemy that ſhall chaſtiſe you, but 'tis the King himſelf of all Kings, who is in Heaven, that hath purpoſed to puniſh you for your Wickedneſs; whoſe Rod ye may [yet] divert from you that is ſtretcht out to puniſh you, if you apply your ſelves to him by ſerious Prayers, true Repentance, and unfeigned amendment of your Lives, now whileſt you have time allotted ye to repent in, if ſuch admonitions as theſe can but find entertainment with you. And what I pray will this warm Winter bring upon us, the which being deſtitute of all cold Ice and Snow hath permitted the Trees to flour in the very month of *February*, and the Medows to be clad in Flowers, and ripe Cherries to be ſeen? Without doubt, nothing elſe but all kinds of poyſonous Diſeaſes aud which will ſpeedily kill Men, and with which mankind will be afflicted; and if ſo be that an intenſe cold ſhould yet follow, which may eaſily be, there would doubtleſly follow a great Dearth of Grain and Proviſion by ſpoiling the Wine and Corn, whoſe buddings are already come ſo far forth, as that the cold may eaſily deſtroy them. And now are we not ſufficiently enough admoniſhed by theſe fore-runners and ſigns of the wrath of God coming on us, and hanging over our Heads?

Beſides all this, let us conſider that great Conjunction of all the Planets in *Sagitary*, ſuch as hath never been ſince that time in which all the Planets were in Conjunction in *Aquarius*. And this Conjunction [in *Aquary*] preceded the deluge, which deſtroyed all mankind by the breakings in of the Waters, *Noah* and his onely excepted. But as concerning what that great Conjunction in *Sagitary* the next year 1663 will ſhow us, and bring upon us God knows. *Sagitary* is a martial ſign, and deadly, and portends nothing but Diſſentions, Seditions, and uproars of War; and therefore propheſieth unto us nothing but bloudy Wars, inſomuch that it is much to be feared that this ungratefull World will be conſumed, and blotted out as 'twere by Fire, and the Sword, and the anger of God: which evil, God of his mercy turn away from us. Certainly theſe Conjunctions are not wont to fore-ſigniſie or bring along with them any good. But I heartily wiſh I may prove a Liar in this caſe, though I fear me, that there is more evil coming upon us than will be welcome unto us.

For when God ſheweth us any thing with his Finger, it ſhould be of more concernment unto us than all humane Writings, for they may err. But God never does any thing in vain and without cauſe. Never did there at any time a Comet ſhew it ſelf in the Air but many Calamities ſucceeded it. That old Proverb may very likely prove true, which the Ancients have pronounced, *viz.* that it will come to paſs in the year 1660, that Alchymy will begin to flouriſh, but will bring along with it ſuch changes for [ſome] years following, and ſuch dreadfull changes too, that the third part of Men will periſh with Famine and Peſtilence, the third part will periſh with Fire and Sword, and there will be but a third part onely left.

But yet I would not that you ſhould take or look upon this my prognoſtication on ſuch wiſe as if all theſe things ſhould infallibly come to paſs as I have predicted. No, I was willing onely to open to you my Meditations upon the years to come. For all things are ſeated in Gods power alone, in whoſe hands onely and alone we know our firm helps and aſſiſtance to be ready for us, and therefore do not in the leaſt confide in our own ſtrength and power, which are more vain than are all fading things.

But foraſmuch as there are natural means granted us, of driving away our Enemies, we may well uſe them as far as in us lies, for that it belongs unto every Chriſtian Man, to do his utmoſt to repell with all his power the common Capital Enemy of all Chriſtendom.

And now therefore that I my ſelf may not be found to be the leaſt in defending my Countrey, I have determined to exhibit in this Book the help and aſſiſtance that I can afford, and this is not Money and Wealth which I have not, but by offering ſuch artificial inventions, and diſcloſing them, whereby the Enemies may be valiantly reſiſted. For in all things we ſee, that many times far greater things may be done with Wiſedom and Prudence, than with Strength and Fortitude, and this is clearly evi-

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evident in the most efficacious Operations of Gun powder, which produce far greater effects than Mens hands, though never so strong,could ever bring forth.

'Tis well known, that the use of Gun-powder was not always known, but was first found out by a certain Monk in *Germany*, in the year of our Lord 1380, who by chance lighted on the finding of its dreadfull strength. Neither is there any one ignorant, what great Victories they that well knew its use, obtained over their Enemies afore it was made manifest. But when it became publickly known, then it served both Parties, so that neither part had more advantage by it than the other, and then the deciding the Controversie consisted (next the blessing of God) in the multitude of the Men, of which their power was composed, and not in Art. And like as it seemed a meerly incredible thing at first when it was heard of, that a Powder of such mighty force could be made of such vile Subjects, *viz.* Brimstone, and Salt-peter, and Charcoals: Even so will it at first exceed all belief, when it shall be heard say that Waters may be prepared out of such Subjects, which said Waters can doe such wondersull, and so many great things.

It is also reported [or Chronicled] that the said Monk did not search after Gun-powder purposely, but being addicted to Chymistry, and occupied about Operations upon Salt-peter and Sulphur, endeavoured to distill a Water from them. Now these being mixt, and by chance taking fire, he perceived them to break every thing, and rend it into pieces: And hence came that man to know the unheard-of Virtues of Salt-peter and Sulphur, which being so thoroughly contrary to each other, made such great concussions or shakings. The same thing hapned even unto my self, for purposing to make sharp Waters out of Sulphur, Salt-peter, and other Salts fit for my purpose; I perceived in such Operations, that far greater things mought be brought to pass by such firey Waters than could be done by Gun-powder. Nevertheless, I buried these Secrets in great silence, nor manifested I them to any man, though I knew them above these twenty years; fearing this, that should they be known, they might be as Instruments in the hands of the Christians to torment one another with.

But now seeing God hath vouchsafed to bestow a peace upon the whole Christian World, and that the *Turks* doe begin more and more to persecute and vex the Christians by their Tyrannical Persecutions, and endeavour even thoroughly to root them out, as they have already made a beginning in *Hungary* of their detestable attempts, I advised with my friends whether or no it would not be expedient to detect and lay open those Secrets to the Christians, that so they may be used against the *Turks*, and I was advised by these my friends to proceed on in the revealing of them. Upon this account (all other businesses laid aside) I wholly betook my self to this very one thing, to get great store of those kind of firey Waters in readiness, which may be made use of as most substantial bucklers or defence both offensively and defensively against the *Turks*. Now I have done this the more willingly and readily, because they kill no man, but doe onely so far debilitate them, that they may be overcome, and easily taken and made Captives. For were this invention of mine such as would kill men, I would never have at any time produced it in publick, and thus divulged it. And therefore I am even yet of this mind, that that Monk *Barthold* did not well in divulging the preparation and use of Gun-powder, by which such a multitude of Men are destroyed and slain.

But by this Invention of mine, no man is slain, and yet the victory wrested out of the Enemies hands. And the Enemies being taken alive and made Captives, may be constrained to work, and in my opinion may bring more benefit than if they were slain.

I doubt not but that the things I here propound may seem impossible even to the wisest [sort of] men of this World; nor indeed is it to be wondred at if it be so; for they are unheard-of Secrets, and unseen, and so exceed all belief. I dare not here trust my Pen too much, though I could disclose them in a few words, and so, as to bring every one to acknowledge the truth hereof, and to feel it as it were with his hands. But I must deal warily, lest such sharp, and yet not killing, weapons fall into the Enemies hands.

But yet that I may in some sort satisfie the desirous Reader, I doe signifie unto him in brief, that all the whole Art lyes coucht in this knack, that vast quantities of those artificial Waters may be gotten without great Expences; and being prepared, may be afterwards applied to use by some certain secret Instruments both offensively and defensively. For those watry Fires, or firey Waters which I speak of, are of such a burning nature, that neither Men nor Horses whom they touch are able to resist [or endure] them; And yet they doe not kill, unless one be minded to slay others, and then they must have a more peculiar preparation. But as they are by themselves, they kill none, but doe extreamly disturb both Horse and Man, that it makes them even impatient of the pains, and so forceth them upon one another, whereby their order being broken, they ruine themselves. This done, the victory is as it were given into the adverse parties hands, whereby they can without any labour vanquish and take their Enemies Captives. I dare not to say any more hereabouts, this onely I add by way of overplus, that even Women (where Men are wanting) may not onely (by this invention of mine) drive off the Enemies from any fenced place, but they may force them out again out of the place, or o'erwhelm the Company of them that are entred with Stones. Though this seems an incredible thing, yet is it most true, and will without doubt, after it shall come to light, in a short time serve as a most notable defence for the Countrey.

And as touching the easie, and not at all costly preparation of the moist Fires and their due use, together with the Instruments hereto requisite; all this shall be shown and detected to those onely who both can and will use them against the *Turks*. But to others not, and this we were willing to signifie by way of admonition or advice.

This little, but yet exceeding weighty Secret, and which may be used against our Countries Enemies with most notable benefit, I have revealed enough of at this time. Mean while I hope, that even this very year the Enemies of the Christian World will be notably endamaged by it, which God of his grace and mercy grant, that it may be a solace and help to the Christian World so dreadfully persecuted by the *Turk*, even for the honour and glory of his holy Name. *Amen.*

Now follows the third uſe, and that conſiſts in the melioration of the Metals, by which alſo great benefit may redound to the Countrey.

AS for ſuch things as concern the true and indubitable melioration of Metals by Salt and Fire, I have already ſufficiently enough demonſtrated in the fifth part of the Proſperity of *Germany*, and in the Appendix thereunto.

But ſeeing my true demonſtration there made, ſeemed not ſufficiently clear and evident to not a few, and that therefore they have moſt lyingly dared to aver, that there is no ſuch thing as a true tranſmutation of Metals, and that ſuch like Affirmations as theſe are meer fables, meer falſities, and meer dreams: Therefore I could not chooſe but (to ſtop the mouths of ſuch wicked Men, and ſhame them,) to lay open and publiſh an evident and palpable truth.

And this is no great task for me to do, for I was many years ago certain of the truth hereof, and therefore can eaſily ſet it afore the Eyes of others, and that not onely particularly [or a particular tranſmutation] but alſo univerſally, inſomuch that even the blind may ſee and palpably feel, that the tranſmutation of Metals is not an old Wives Fable, but is a certain and firm Science, and what is riſen even from the foundation of nature her ſelf. If now I ſhall prove it to be thus, I have then I hope ſecured my affairs, and have not onely defended the Writings my ſelf have ſent abroad, but withall the moſt true aſſertions of other honeſt Men, and ſo ſhall have evidently demonſtrated thoſe things which to the greateſt part of Men ſeems a thing impoſſible to be done.

Albeit that there are many who have left us the truth in their Writings, yet are they ſo involved in obſcurity, that ſuch as know not the Fundamentals of the Art, can never learn ought of certainty from them. Whence it comes to paſs, that ſo many Men have vainly attempted the Art, and therefore the Art it ſelf hath been mightily deſpiſed.

The Tranſmutation of Metals is not a thing of ſo ſmall a moment (as that eminent Philoſopher *Sandivogius* witneſſeth) in his Preface prefixed to his Writings; where he alſo tells us, that he that obtains the knowledge of the ſame, ſo as to tranſmute any imperfect Metal into a more perfect one, though it be done without benefit, hath met with an open Gate, and entrance leading to greater matters, and this is alſo exceedingly agreeable with the truth. For if any one ſhall take ſome imperfect Metal, and by handling or dealing with it with ſuch or ſuch matters, ſhall find that it is advanced to a golden or ſilvery nature, may more deeply look into the buſineſs with fuller and more accurate Meditations, and [at length] wholly ſearch it out, *viz.* whence that bettering proceeds, and by what means or in what manner his labours are to be contrived.

And now when ſuch an one doth make fix and conſtant, ſuch or ſuch a Metal by the benefit of the Fire, and uſeth no other matter about the Operation but Salt, and doth really find a true melioration of the Metal, certainly he cannot aſcribe it to any other thing but the Fire and Salt: and now whereas he aſſuredly knows, that the melioration of Metals can be perfected by the help of no other thing but of Fire and Salt, he will not need to ſearch for any other, but will rather wholly apply himſelf thereunto, whereby he may moſt commodiouſly deal with the Metals by the means of Fire and Salt, and better them with profit. And if now he be once Maſter of his deſire, he will gain ſufficiently thereby. But if not, he cannot blame the Art but himſelf, who indeed ſees the poſſibility of the Art but hath not (yet) entred in by it, or through it to the great Treaſures it diſcloſeth, ſo as to take to himſelf a due or competent part. But foraſmuch as ſuch happy Men are very ſeldom found, who find the Key that opens the Doors to ſuch Myſteries, I judged it a thing worth while if I did here detect this very Key, and ſhow by what means the Gate (by which the cloſeſt of Arts is made faſt) is wont to be opened. And if now it ſhall pleaſe the Studious Artiſt to enter thereinto, he may with all my heart, and ſo enjoy thoſe Treaſures. I will not paſs the bounds I have intended to obſerve: it is ſufficient for me to have ſhown the right and kingly way, wherein every one may go that liſteth, that ſo he may arrive to his wiſht for end.

But as for the Key that unlocks the Cloſet of Art in true Alchymy, I do confidently affirm, that Salts are ſuch Keys, and eſpecially Salt-peter, and alſo common Salt and Vitriol, each of which is of it ſelf efficacious enough to open the Door which ſhuts the Parlour or Cloſet of Arts in Alchymy. But one Salt joyned with another as is expedient and in convenient wiſe as Art requires, does effect more and ſhow greater power than if it abode alone, and this my Writings do too and agen largely ſhew. But thoſe Salts are in an eſpecial manner more excellent as to power and virtues than others are, thoſe I ſay which being firſt made volatile or ſpiritual are afterwards made corporeal, like as the following example doth evidently demonſtrate.

An evident demonſtration of the poſſibility of tranſmuting the viler Metals by Salt and Fire into more noble ones.

TAKE of Vitriol two parts, and of good Salt-peter one part, mix them well, and being mixt diſtill an *Aqua Fortis* therefrom, with this Water, diſſolve Silver or Lead, and pour into the Solution ſome Spirit of Salt, or elſe ſome common Salt onely diſſolved in Water, that ſo the diſſolved Metals may be turned into white Powder, and precipitate to the bottom of the Veſſel. This done, waſh off the *Aqua Fortis* from the *Calx* of Silver or Lead, with Rain-water, and you ſhall find it to be one quarter part encreaſed, and this augmentation cannot be waſht off with any Water. Now theſe ſaline Spirits do make the *Lune* and *Saturn* ſo very volatile, fuſile, and flying, that they melt in a ſmall heat and penetrate all hard Bodies. Upon this account I called thoſe fugacious and fuſile Metals, by the name of a *Mercury*, which ſaid *Mercury* of *Lune*, or of *Saturn* hath aſſumed to it ſelf onely ſo much of the Salts as it needed, to amend it ſelf in the Fire, when they mutually act upon each other, and the Salt maturates the Metal.

But what courſe ſhall we now take with theſe Metals, ſeeing they are ſo very volatile, that they cannot reſiſt the indifferently ſtrong force of Fire, and therefore go away in fume? And foraſmuch as they abide not the Fire and do not die, by what means can they be amended?

There is no better way to be taken with them here, than (for prevention of their volatility) to add to them ſome metallick body, into which, the fugacious exceeding fuſile, and Salt Metal may hide

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it self, and so brook the Fire. And amongst these six metallick Bodies, I know not as yet of any better than Tin reduced into Ashes, which is most fit for this Operation, because it is the most unfit or hard to melt of any the *Calx's* of the rest of the Metals.

If therefore you will make experiment of this Operation, adjoyn to one part of the *Mercury* of *Lune* or *Saturn* two parts of the white Ashes of Tin, which being well mixt and put into a Glass Cucurbit well fenced with Lute, set it into Sand, put Fire thereinto by little and little untill the matter in the Glass be well heated; in this darkish red hot heat, leave it so long untill some part of the matter doth ascend by sublimation up into the Alembick placed at top, and up the neck of the Cucurbit. Then you must put on another Alembick, and take out all the sublimate out of the former Alembick, and put it back upon its matter in the Cucurbit, and it is to be again left so long in the Fire, untill there doth again ascend some part by sublimation into the Head. This being taken out of the Head is to be again put into the Cucurbit, and to be added to its own matter, (and to be proceeded with) till again some portion sublimes up out of the matter into the Alembick. Now these labours are to be so often repeated, untill there ascends no more matter up into the Head, and all the matter abides behind in the bottom of the Cucurbit fixt. This being done, a stronger Fire is to be administred, that the Metals may be operated upon by the Salts. For by how much the more and longer they endure the violence of the Salts, so much the better do they grow, which being taken forth and reduced by the adding unto them their due matters and being separated by a Cupel do yield forth a notable encrease of Gold and Silver.

This undoubted Experiment and evident Demonstration, doth (by its evident Operation) clearly and perspicuously teach and prove the melioration and transmutation of the Metals into better and more pure; but if this way seems to any very laborious and full of troubles, I will show him a more compendious way and such as is of less labour, for the sake of searching out the truth.

Fill a Hassiak Crucible (one of the best make) with the self same mixture, *viz.* one part of the *Mercury* of *Saturn*, and two parts of Tin-ashes, and squeeze in the matter thereinto with your Thumb pretty hard, and fit at top of this Pot, another somewhat lesser, so as that they may shut close and tight at their mouths, and one may not fall off from the other, if they be turned (topsie turvy:) Now in this upper Pot, put some Plates of Copper in, afore you place it on the lower one, yet on such wise that in the turning the Pots (up and down) they fall not out of their places. Each Pot likewise is to be well fenced with Lute such as will not chap when it is dried, and yet it may be mended if it should a little cleave by dawbing some more on, and this is done, that no fume at all get out. The Lute being dried, place this double Pot or Crucible in a circular Fire, and augment the Fire more and more, and move it nearer and nearer it untill it be well heated. Then put thereto larger Coals, and cover the Pot all over with them, that it may be every where red hot, in which great heat of the Fire it is to be left some two or three hours. Then being cool, take out and open your Pot, and you shall find the Copper Plates in some sort tinged with a white colour, but yet this colour is not so constant and fix as to abide in the Cupel or on the Test with its Body. Therefore necessity requires that those Plates be dissolved in *Aqua Fortis*, and be precipitated by pouring thereon Salt dissolved in common Water, in which precipitation the Silver *Calx* settles to the bottom. This *Calx* being freed of its Saltness by pouring Water thereon, and being dried, is to be wrapt up in a Plate of Lead, or some sheet Lead made as thin as Paper, and be put on a red hot Test, in which there must be a little Lead in Flux, which may the more readily receive the silvery *Calx* wrapt up in the leaden Paper, and which is volatile, and may hinder it from going away in fume; the Lead being consumed, there will be a grain of Silver abiding on the Test, which being dissolved in *Aqua Fortis*, will let fall some Gold to the bottom. If any of the remaining matter in the Crucible be to be reduced, then boil it with Lead, and let it be reduced into *Scoria's*: out of the *Regulus* will there also remain on the Test a grain of Silver containing Gold in it. But this way brings no profit, as being here taught for this onely end to demonstrate the possibility of the thing. But if you would get any profit by such an Operation, it will be altogether necessary to use such Vessels in which nothing at all may go away in fume, but all the matter may abide together, and may so get a fixity and constancy: and this cannot be done in Crucibles, but it will bring a profitable melioration by the said way.

Some may now demand from whence that Gold and Silver should come? whether out of the Lead or out of the Tin? doubtlesly it comes from both. And therefore seeing the Copper Plates in this Cementation, as likewise the cementing powder it self have put on a golden and silvery nature, can any one doubt that this is a true Transmutation by Fire and Salt? And this is especially manifest even from the Copper Plates, which had nothing at all toucht them, save the saline Spirits ascending up out of the Cementatory Powder, which in the heat of the Fire penetrated the Copper, and amended it in so short a time. Is there any one now so blinded as that he cannot here see, that this bettering the Metals proceeded from Salt and Fire. Certainly no body will be able to heal him that is blinded with such a darkness of his sight, and therefore must he even lie all his lifes time in such obscure mists. For this Operation is set down so clearly and evidently that it may be even felt and perceived with the hands.

N. B. If so be any one is desirous of getting more Gold and Silver by the help of this Operation, he may use the *Mercury* of *Lune* instead of the *Mercury* of Lead, for it will yield far more than *Saturn* will.

I could exhibit no small variety of these kind of Experiments, but that the shortness of time bids me stop, and forbear their description; those that cannot learn ought from these things, greater ones will not be at all usefull unto them. Thus have I a-new evidently demonstrated, that a particular melioration of the Metals is done by, and proceeds from Salt and Fire alone.

An infallible demonstration, that a true tincture or universal Medicine may be made by Salt and Fire, for the melioration of Metals.

Recipe one pound of the *Mercury* of Lead, or rather of *Lune*, of the Ashes of Tin two pounds, mix these matters together and put them into a Glass Retort

Retort coated, and put it in Sand, or rather in an open Fire, and give a Fire by degrees. In this Operation, the Salts inhering in the *Mercury* of *Saturn* or *Lune*, do diſplay or exerciſe their virtues upon *Jupiter*, and ſeize upon it and leave the *Lune* or Lead, and aſcend up into the neck of the Retort like *Mercury* ſublimate, and are very heavy and ponderous, and do very rarely fall down into the Receiver, becauſe they preſently ſettle aſſoon as ever they feel any Refrigeration. Therefore it is needfull that the neck of the Retort be ſomewhat wide, that ſo the *Mercury* ſublimate may meet with ſpace and room enough, and may not by wanting room break the Retort. Now when the Retort has been kept three hours in a red hot heat, which time is requiſite for the *Mercury* ſublimate to aſcend in, then ceaſe from continuing or keeping on your Fire, that ſo it may cool. Then take out the ſublimate out of the neck of the Retort when cold, and you ſhall find about ſome eight Lots 4 Ounces, and proceed with it the way following, as we ſhall by and by tell you.

Mix the Reliques or what is left, with two parts of *Regulus* of Antimony made with Iron, and melt it into a body: Waſh off the *Regulus* and Tin from the Silver with Salt-peter, and you ſhall have your Silver not onely encreaſed by the *Jupiter*, but alſo indued with ſomewhat of a golden nature; as much as the Salts could maturate in ſo ſhort a time, which is indeed a ſpeedy Tranſmutation. But if you uſe *Mercury* of *Saturn*, there will not follow much amendment in ſo ſhort a time. Yet nevertheleſs, that even the truth it ſelf may even by this means be ſearcht out, there may be added a little Lead, and be boiled and reduced into *Scoria's*, in which there will remain a grain of Silver, which will give you information, how much melioration the ſaline Spirits are able to beſtow in three or four hours ſpace.

But this is not the right way of getting profit, for as much as it ſhows onely the poſſibility of the thing.

But if you would have any profit by ſuch an Operation, you muſt get you a Cucurbit for this ſublimation made of good and vitreous or glazefying Earth; and the ſublimed *Mercury* muſt be taken forth of the Alembick, and be again added to the dry matter lying in the bottom of the Cucurbit, and this Operation of ſubliming it muſt be ſo often repeated, till there aſcend up no more, and that all abides fix with the Tin. Then is a ſtronger Fire to be put thereto, and the *Jupiter* and *Saturn* will be maturated by the Salt as we taught afore. And if now any be minded to take that ſame ſublimated matter, as it aſcended in the firſt ſublimation, and would make it fix and conſtant (*per ſe*) in a Glaſs, he would get a Tincture that will in projection tinge with a white and red colour, but yet I never have as yet tried the latter of theſe. However I doubt not, but it may be done. For ſeeing that this ſublimed matter, doth (though it be ſo volatile) penetrate the Plates of Copper, by three or four hours time cementation, and turns ſomewhat of the ſaid Plates into the nature of Gold and Silver by graduation, how much more would it do, if being brought to a due fixity and conſtancy, it ſhould be projected into ſome molten and flowing Metal? For that in ſuch a white ſublimate (principally in that which proceeds from *Lune*) there lies hid alſo an occult redneſs, and may be manifeſted by the Fire, this I ſay, mine Eyes have ſeen, and mine hands have felt, but have not as yet brought the Operation to its compleat end, by reaſon of various lets and want of time.

Farther, by ſuch a ſublimate *Mercury* may likewiſe be wrought various Tranſmutations, which I think not fit to divulge. It is in its nature fugacious and volatile, and yet notwithſtanding doth it in proceſs of time make all other volatile and fugacious matters, ſuch as are Arſenick, Auripigment, Cobolt, and even the moſt flying of all, *viz.* common *Mercury*, fix and conſtant, which effect is to be attributed to the Salt onely. He that knows rightly to manage this Operation, will not labour in vain, but will be rendred a partaker of great ſecrets, which thing I leave to the Sons of Art, as a Teſtament or Will.

But yet that I may kindle ſome little Torch for to guide the deſirous Reader, and may make him more certain of a true Tincture, which this abject *Mercury* ſublimate ſhowing it ſelf in a white colour hides in it, I have thought good, yet farther to add this following way.

Extract out of this ſublimate a running *Mercury*, vivifying and ſeparating it by apt and magnetick ſubjects; and evaporate a little portion or particle thereof, of about the bigneſs of a Pea, in a Silver Spoon; when 'tis all gone, you will find a purple Powder left in the Spoon. If you caſt this Powder upon hot boiling Lead, you will find after its blowing off, a grain of Gold on the Teſt. The Spoon it ſelf will bear the mark of a purple ſpot in that place, in which the *Mercury* went away in fume, and it cannot be blotted or rubbed out, becauſe the *Mercury* hath deeply impreſſed the Tincture in the Spoon.

Now may ſome or other ſay unto me, whence did that little grain of Gold left on the Cupel, and that purple ſpot which tinged the Silver Spoon, proceed, came it from the Lead or from the Tin, or from the Silver, or out of the ſaline Spirits? The greateſt part of Men will ſay it proceeded out of the Lead, Tin, or Silver. But I ſay, that it did indeed come out of the Lead, Tin or Silver, but that the Tincture adjoyned thereunto is for the moſt part the true Soul of Niter, which the *Mercury* took unto it ſelf, and again left it and forſook it aſſoon as ever it was vexed or forced with the Fire. But I doubt not but that if ſuch a *Mercury* impregnated with the Soul of Niter, were fixed and made conſtant in the Fire, it would afford an univerſal Tincture.

I confeſs I have tried many a time this Operation in ſmall Experiments, which ſometimes anſwered not my deſires, what diligence ſoever I uſed thereabouts; but when I attempted it in a greater quantity it never ſucceeded. This thing ſeems to be poſited in the will and pleaſure onely of the Omnipotent God, who will not have thoſe his ſo great Myſteries and Gifts profaned. I have indeed (like unto *Moſes*) ſeen the promiſed Land, but yet I do not know whether or no God will bring me thither in this Life, that ſo I may enjoy thoſe moſt precious Fruits.

And if God ſhould not vouchſafe me that benefit, yet do I willingly reſt content with this, that I have ſeen with mine Eyes, and felt with mine hands the truth of the Art more than once, which Art ſo many thouſands of Men do ſo greedily gape after, but yet not with ſuch good hap and ſucceſs as to find it out or ſee it.

I have I ſay ſeen the truth, but not the Tincture brought to its end or perfection, but yet have I ſeen its beginning which makes me certainly aſſured ſo far, as that I dare to affirm, and confidently aver, that there is in nature ſuch a thing as a true Tincture, and that it may by Gods bleſſing be prepared by an Artiſts hand. I have not yet had ſo much

quiet

quiet and so much time as to undertake this so weighty a Work. Yet now I have a resolution to set aside all worldly cares, solicitudes and businesses, and to attempt and wait upon this kingly Work, and expect what the divine grace will bestow upon me. For we are to look for all good things from above, for else we labour in vain, whatsoever diligence we make use of.

These things I was willing to publish for the Assertion sake of the truth, and to prove that there was in nature a true Tincture, that so it may evidently appear that Metals may be transmuted both universally and particularly. And if by some desperate Men or by a sudden and immature death (which chances God of his mercy graciously keep from me) all the *Mediums* or means of perfecting so great a Work, and finishing it should be cut off from me, yet notwithstanding the truth it self will be able to bear witness to my sayings when I am dead and gone. For I have by me even yet those Silver Plates tinged with Purple Spots, which can at all times witness the truth of those things I have here delivered. For it is an impossible thing that Silver should be tinged with a purple colour without a Tincture. If therefore there is to be found the truth in that white and fugacious sublimate, what I pray would be found in the fix and Fire-abiding red Tincture? Would it not be, that effects of far greater moment would be produced by such a Tincture. The Ancients therefore that desired firmness of health and a long life, bestowed such labours and sweats upon getting a true Medicine for humane and metallick Bodies, and some of them arrived to their wisht-for end, but the greatest part of them were deceived with vain labours, and frustrated of their conceived hopes.

If any Man did certainly know that there were in some places to be found mighty treasures of Gold, Pearls, and Precious Stones, and it were granted every one to search after them for his own proper advantage, what think you, he would be lazy and slow, and would not set himself to seek after them. But if any should so order his search that like a blind Man, he neither knows nor sees what it is he seeks after, or in what place it is to be sought by him, certainly such an one would labour in vain, and lose both his time, pains, and costs; and this usually betides the greatest part of Men, for they spend their labours in vain in their search after this Work, because (like blind Men) they neither know what they are to seek, nor where. But yet 'tis credible that there would not such a multitude of them have stray'd from the truth, had but any one so clearly and perspicuously shown and pointed as it were with the Fingers at the place where the Treasure lyeth hidden, as I have now done.

And although the envious and lying Devil should oppose the truth even with his greatest power, and should most cruelly rage against it, yet notwithstanding he will not be able to shew us any one Man that hath produced and brought the truth forth to the light with greater perspicuity and evidence than *Glauber* hath.

I have therefore yet once more at present shown by a most evident demonstration even before the whole World, and have asserted it for a truth, that not onely the more imperfect Metals do admit of being really transmuted by Salt and Fire into the more perfect ones, but withall, that by them, [*viz.* Fire and Salt] a Tincture may be made.

And now let all mine enemies visible and invisible ones, open and secret ones, what name soever stiled by, come forth and publickly produce the true Transmutation of Metals, with a clearer and more conspicuous manifestation than I have here done. I acquiesce with what I have hitherto spoken; if God shall please I will divulge admirable things in my next third Century. In this little Treatise there are laid open onely four secrets, but yet so clearly and conspicuously that no body hath as yet manifested such and so eminent things with clearer and more perspicuous expressions.

For that first Instrument is clearly enough described, by the help of which, not onely a great plenty of all sharp Spirits may be prepared with very little costs and easie labour, and the four-fold use of these Spirits is able to bring most great profit to the Countrey.

1. All Gold, Silver, and Copper are thereby extracted out of the poorer sort of Oars which *Germany* abounds with every where, and that in a far easier manner than by fusion, and are so brought to a very gainfull improvement, to the great benefit of all *Germany*, the which hath never been hitherto done.

2. Of the said Spirits is made a Water-attracting Magnet, for the bettering of poorer Wines, that so they may keep good, and be the easilier transported out of one place into another, as I have signified in my second Century. It is a secret which offers gain both to the rich and poor, and may be prepared in great plenty.

3. The imperfect Metals are sundry ways bettered by those saline Spirits, of which may be made vast quantities as I have shown in this Work or Book, and this melioration my Writings do variously teach and treat of.

4. By the help of these fiery Spirits of Salts, preparable in mighty plenty, which is a thing commodiously to be done by the Instrument described in this Book, may the *Turks* who are the Enemies of the Christian World be resisted without any Bloud-shed. Concerning these fiery Waters, which being such a notable destruction on the Enemies, this is here to be noted, that immense quantities of them are easily gotten without any Distillation and with very little expences.

For if much be to be effected by them, it is necessarily requisite to have vast quantities of them in readiness, without which, no great matters are in this case to be accomplisht. But as concerning the manner of so greatly endammaging the *Turks* by these moist Waters I cannot so accurately describe the same here, as being a meer stranger to, and ignorant in military affairs. However I will briefly and in few words shaddow out, what way I think it may be done by, *viz.* to resist and mightily endamage the Enemies by them.

First of all, this is the nature and property of these moist Waters. As to outward view they are like Water, and may be handled or dealt with as other common Waters, but their inward virtue is nothing but a meer Fire. And because these moist Waters may be thrown not onely with the hands, but with greater Warlike Engines or Guns a good way off, by artificial Instruments prepared for that purpose; therefore is the use of them manifold, and as necessity requires may they be used several ways for the expulsion and overcoming of the Enemies. We will illustrate our meaning by an example. Suppose I am in a City or Castle besieged by the Enemies, and that I have by me some of those kind of Instruments

which are accommodated to this uſe for the moiſt Fires. If now the Enemy ſhould ſet upon the Trench, Wall, or a Bul-wark, and I were furniſhed with that defenſive Water of mine, ſhould ſtand behind the Wall or Bul-wark in that place which the Enemy ſets upon, he could not poſſibly come at me; for thoſe moiſt Fires may be caſt by the ſaid Inſtruments far without the City, like a fiery ſhowr of Rain, or like a Cloud, which Rain being forced out of but one onely Inſtrument would dilate it ſelf far and wide upon many hundreds of Men, and whatſoever it touched it would hurt and burn like common natural Fire, and it would eſpecially blind their ſight, ſo that the Men would not be able to look up or ſee. If now the Enemies ſhould make their attempt upon any place, and there ſhould be ſhoured down upon them ſuch a fiery Rain, and by hurting their Eye-ſight make them quite blind, how would they be able being blinded to get over the Walls or Bul-warks? I do believe that if they ſhould have gotten over the Walls or Forts, and be made thus blind, they would be heartily glad if they could but get out again and recover their own party. But it would be better to beat them off, and blind them when they come with their Ladders to ſcale the Walls, than to permit them to approach any nearer. But yet if it ſhould ſo happen that the Enemies had gotten even into the City it ſelf, and there were ſome Houſes in the principal places or ſtreets in which the defendants may rally themſelves and that ſuch Houſes were furniſht with ſuch moiſt Fires, and that ſuch fiery ſhowers were ſhot out thence ſo blinding them that they durſt not open their Eyes, what I pray would they be able to do, being blinded and clearly deprived of the uſe of their ſight? Would they not throw away their Arms and ſolely mind the getting the Fire out of their Eyes, and yet it would hardly be ſo done in half a days time, nay if it ſhould touch their Eyes in pretty quantity, it would ſcarſe be quencht in two days time, and if they ſhould go to wipe their Eyes with their hands, then would they make their torments much more intollerable, and would add more Fire to their Eyes, becauſe their hands are likewiſe moiſtned and plagued with that continual ſhour. And now may not ſuch unbidden Gueſts be overwhelmed and ſlain with Stones caſt on them out of the adjoyning Houſes? And may not one ſingle Woman with ſuch a little Inſtrument onely filled with theſe moiſt Fires defend her Houſe againſt an hundred Soldiers. Verily in my opinion there may be made a better defence with ſuch a little Inſtrument that one may carry about with him, than with ten or even an hundred Muſquets. For 100 Muſquets require 100 Men, all which when they have diſcharged their Guns once, and have ſlain ſome ten or twelve Men (and yet it is not wont uſually to happen ſo in ſuch caſes neither) they need ſome time to load their Muſquets again, if they would keep on ſhooting. But this Inſtrument may be uſed even by Women, two or three of whom will haply do more hurt to the Enemy than twenty or thirty, yea haply one hundred Men are able to do with their Muſquets. And if the Women and other weak Men do but blind their Enemies, the armed Men may take them thus blinded Priſoners; that ſo not being killed but made Slaves, they may be ſet to Work and Till the Land, and this would be far more profitable than the killing of them would be. So then, may not an hundred Soldiers by the help of my Inſtruments defend any Fortreſs with greater and more certain defence than a thouſand Men could otherwiſe do. Verily I believe they may. For theſe blinding Fires of mine, or fiery Clouds and Rain being adjoyned to other uſual and cuſtomary military Weapons, will moſt mightily endamage the Enemy, nor will there need ſo many Soldiers, for the Citizens themſelves may uſe the other [cuſtomary] Arms, and the Women and Children may uſe the Inſtruments, whereby they would haply defend themſelves more ſtrongly than if they committed their defence to choſen and regiſtred Souldiers.

For theſe Inſtruments, (by which the moiſt Fires are driven far off upon the Enemies like fiery ſhowers and Clouds of Rain, and that without intermiſſion, and as oft as ever need requires) although they be great, yet a few Men may govern or manage them, ſo that it will be impoſſible for the Enemies to effect any conſiderable enterprize in beſieging any City. But it is needfull to place ſuch Inſtruments that thus ſquirt forth Fire, behind the Walls and Bul-warks, that the Enemies great Ordinance may not hurt or deſtroy them. Verily I cannot ſo very accurately ond compleatly ſhow what [the beſt] way [is] of endamaging the Enemies by the help thereof, for this the practice it ſelf will better ſhew us. I can furniſh forth the Inſtruments themſelves and the moiſt Fires belonging thereunto. I commend the uſe of them unto the Souldiers, who may learn to uſe them as they ſhall find good by experience. I do again repeat what I have hitherto ſo often ſpoken, and I do affirm, that with one ſuch Inſtrument may ſome thouſands of Men be blinded in a moments time, and being blinded what I pray can they then do? If ſo be that others ſhall endeavour to come to help them and fetch them off, they may likewiſe be blinded, nor can they run away, and therefore muſt neceſſarily be taken Priſoners. And this in my judgment may be done in Hoſtile Invaſions and Sieges.

But now whether or no there may be any uſe of ſuch Inſtruments in Battailes and Conflicts with the Enemies, I do not well know, but that a City, Caſtle, or Houſe may be defended by their means, and ſo drive off the Aſſailants, is a thing evident and undoubted. Should there be a thouſand Enemies beſet the Houſe of ſome particular Citizen, yet muſt they depart if onely ſuch a fiery Cloud or Rain (the Doors and Windows being ſhut) ſhould be ſhoured down upon them. For ſo they would be rendred blind and not be able to ſee or find the Door, as it was in *Lots* time, when his Enemies environed his Houſe to have out thoſe two Strangers, they were ſmitten with ſuch blindneſs that they were conſtrained to leave the Houſe, and it was permitted *Lot*, and his, to paſs out of the ſame without any impediment. And is it not lawfull for us to ſmite our Capital Enemies the *Turks* with blindneſs, and to defend our ſelves, our Wives and Children?

God himſelf ſaith, I will encompaſs thoſe that are mine, with a Wall of Fire, and defend them againſt their Enemies. Briefly, this invention of mine, of making ſuch a fiery Miſt or Rain, is an incomparable defence and ſafeguard, the like of which was never as yet known in the World. And now may any one eaſily conjecture what may be done offenſively with this ſame invention. For example, ſuppoſe 'tis neceſſary to take ſuch or ſuch a place from the Enemy, but now there is not time enough left, nor are there Souldiers enough for the enterprize; and therefore ſome Stratagem muſt be uſed to become Maſters of

of one of the Gates at least whereby the Souldiers may be let in.

And now in my judgment some Gate may be sei zed on and that easily by the help of these moist Fires of mine, and 'tis thus, let some Souldier or other fit for such a design, be taught the use of my Fire spiting Instruments, and when he understands it, he may be clad in Countrey Habit, and so let him go to them upon the Guard, and in the Court of Guard-houses in which they be, let him shour in upon them a fiery, Eye-blinding, and forcibly hissing shour. [This done] how can the Guarders possibly resist those that come to the Gate and are ready to enter in? Nay more, the Souldier thus clad may have a Granadoe given him to carry in a Sack, which being filled with those moist Fires, may of its own accord (without any benefit of Gun-powder) leap assunder and fill all the whole room with his blind making Dew, he may throw into those Watch-houses where they keep Guard, and so make all that are there present unfit to fight. And if so be there should be more of those Houses than one, the same Souldier may likewise have more such Granadoes given him, one of which he may throw into each House. Nay farther, if need be, and that you would have it fadge better and have it more certainly succeed, there may be sent several Souldiers with such Fire-breathing Granadoes to several Gates, to o'rewhelm the Watchmen and possess them. For the Watch-men suspecting no evil from one Countrey-man onely, will not cry out Arm, Arm, but let him in without any impediment. Such Fire-breathing Balls or Granadoes may be made of Iron, Copper or Earth, which however, properly are not Fires as long as they feel not the Air, and they then become Fires onely, when any one is so minded to have them such, breaking every thing in their reach like Gun-powder burning, and depriving all such as are present of their sight, and making them Sick. Granadoes made on this manner, and of about the bigness of a Mans Head, do not of their own accord conceive a flame without Air, nor do they flie assunder, or at all operate. But if you would that the Air be let in whereby they may operate, there must be a little Spicket or Tap to be drawn out of the Granadoe, that so the Air entring in may vivifie the Fire that lies in the Ball or Granadoe. Such a Granadoe being thrown into any Watch house, the Watch men will without doubt presently run and take it up and see what it should be, and what end it was thrown in there for; then as they all of them stand round and contemplate upon the novelty, if any of them hap to draw out the Spicket, which without all question they would do, the Air gets in, and the Fire enkindles and breaks that Granadoe thus stuft with that venemous Fire all to pieces, and so will strike them all down together. And may not now the Souldiers in the mean time hasten and break in to that fenced place without any let, and become Masters of the Gate? Verily methinks it should succeed very well. I tell you my thoughts of the business, I never tried the thing it self nor do I ever desire to try. Such as have a desire to try it, and have occasion and opportunity of doing it, may more accurately contemplate thereupon, and so will they find what way they may most conveniently detriment their Enemies most of all by. I have laid the foundation, others must valiantly proceed on and bring the thing to a most usefull Issue. However I do not doubt but that the most part of Men that shall hear me say, that there may be such effects produced by these fiery Waters, that may equal the dreadfull Operations of Gun-powder, will mock at me, and judge it an impossible thing; nor will it be any thing strange they should, because they have not any knowledge of nature.

Before those dreadfull virtues of Gun-powder were known, certainly no body would have believed the same, had they heard it told, that it were a possible thing thing to hurry or throw such a great Ball of Iron, into so far a place with so little Powder. And now it is a thing so very common, that he that will not believe it will be laught at. Even so, those things I have here mentioned of moist Fires will seem extraordinarily wonderfull and absurd to the ignorant, untill they shall see with their Eyes, and feel with their hands, that the *Turks* shall even this very Summer feel it if God permit, and vouchsafe me health so long. If God (I say) shall permit, which I would have you understand, as thus, *viz.* unless the wrath of God shall be so enkindled against the Christians, and shall therefore put a stop, and prevent the accrewing of any benefit, by any help how great soever it be. For when God pleaseth to punish any Countrey with deserved afflictions, certainly no Instruments of defence will at all help or do ought.

These things was I willing to declare at present, to demonstrate in what manner the Enemies power may by such Artificial moist Fires, and a peculiar kind of Granadoes, such things as never were as yet known in the World be broken. There are verily other far greater effects, and which exceed Mans belief, that may be effected by these my newly found-out Fires; and such as are not to be written but to be revealed onely unto those that are truly well Willers to the common Weal, and who study how to destroy the Capital Enemy of all the Christian World. But thus much I add, that by these Artificial, Secret, and unknown burning and flame-conceiving Fires, far greater things may in my judgment be effected at any time whensoever one is minded, than by Gun-powder, for that it operates not afore it be enkindled with the Fire. But my Fires are enkindled and inflamed by the Air, and therefore must necessarily exeed Gun-powder in the production of greater effects, and this time will manifest.

Those common Granadoes being thrown into any City may be covered with wet Hides or Cloaths and be quenched, so as not at all to operate, but it cannot be so with my Instruments. And therefore it is not without cause that I prefer them afore Gun-powder.

'Tis not expedient to make any larger discourse concerning these matters, and to take up any more room by revealing more. I could verily in a few words so disclose these things that every one mought be able palpably to feel, and visibly to see them, and so as that he would assuredly know that far greater things mought be effected by these my Fires than by Gun-powder. They may together with the Gun-powder use these my moist Fires as they think good and as need requires. And I do not question but that hereafter Wars will be waged after another manner than hath hitherto been done, and force must give place to Art. For Art doth sometimes overcome strength. We will illustrate the business by an example.

When any little weak Man Fights with a bigger and stronger than himself, and they have both of them like skill in the use of their Arms, the stronger over Masters the weaker and Conquers him. But

now

now if the little Man be better skilled in the uſe of Weapons than the greater and ſtronger one is, he beats him and becomes the Victour. And when two are of equal Stature and Strength; they ſmite alike forcibly, and beat one another alike, juſt as your Laundreſſes that beat Cloaths with a waſh Beetle, ſo do theſe lay on blows on each other with like meaſure. So among the Ancients did they fight Man to Man, and the ſtrength of the blows prevailed. But when Gun-powder was found out, then a few could kill and put to flight a greater number than themſelves.

And now again 'tis every where known, that Men now a days do again fight with equal hand, as 'twere, neither party having more help [by Art] than the other party hath: ſave that the ſtronger party doth for the moſt part get the Victory, ſo that the Wars in our time conſiſt not in Art, but in the multitude and company of Men. Mean while I firmly hope that if the uſe of my moiſt Fires be but known, there will be another kind of Warfare than now is, by fighting on equal Terms with blows as the Countrey fellows do, and whereby the ſtronger can overmaſter and ſubdue the weaker. But now by the help of Art, the weaker may overcome the ſtronger. And if ſo be that Art and ſtrength concur together they are wont to be moſt efficacious. *David* with his ſling ſhewed the skilfulneſs of his Art, and ſubdued that great *Goliah*, who little expected ſuch a miſchance from ſuch a little Shepherd. And like as *Goliah* mocked at *David* with his Sling, ſo perhaps will the *Turk* have us in deriſion, ſhould we meet him with ſuch Water-throwing Inſtruments. But even as that great *Goliah* was ſmitten down by a Stone of the Shepherd, ſo may the *Turk* be eaſily burnt and radically rooted out by thoſe moiſt Fires, if the Chriſtians will themſelves.

But ſome or other may here object and ſay, ſuppoſe ſome perfidious Chriſtian ſhould happen to flie to the *Turks*, and put ſuch Weapons into their hands, to uſe againſt the Chriſtians agen, what ſhall we do then? [I anſwer,] ſuch [a miſchief] may be prevented by an accurate diligent warineſs, that theſe ſecrets be not revealed to every body, but to ſuch onely as are known, and that have poſſeſſions, Wives, and Children: for ſuch will hardly be allured or corrupted with any reward. Beſides too, the vulgar will not be ſo eaſily apprehenſive of all things hereto requiſite, ſeeing the Art conſiſts not barely in one or two, but in many things [or circumſtances] It cannot therefore be that ſuch inventions ſhould ſo eaſily fall into the Enemies hands, and that for ſeveral cauſes which I forbear to reckon up here. Nay more, if neceſſity ſhould require there mought (by accurate medtiation) a farther inquiſition be made, whereby more ſuch inventions mought be found out. For this may eaſily be effected by Men of a quick piercing Wit, *viz.* by their diligent ſearch to add to what is found out and to better the ſame, for 'twill be a facile thing to do. For nature being ſo moſt exceedingly richly ſtored can never at any time be thoroughly found out. And therefore even I my ſelf do hope in ſome ſhort time greatly to augment [or meliorate] the ſaid Inventions of mine. If God vouchſafe me life, there ſhall be even yet produced by me to light wonderfull things, which will miraculouſly promote the ſafety and happineſs of my Countrey, and eſpecially if I ſhall but find amongſt Men a thankfull remembrance thereof.

Moreover, I doubt not but that abundance of Men will wonder if they ſhall ſee theſe my newly invented Warlike Inſtruments to be publiſhed in Print, which is a thing that I would never do, for I have reſolved to make ſuch onely partakers of the knowledge of the ſame, as ſtand in need thereof.

But becauſe I have conferred with one or two (whom I thought to have born me a loving and friendly mind) about theſe things, and ſpake to them too openly about the very buſineſs it ſelf, they got ſome part of the Art it ſelf, and ſaw the very Inſtruments in the Workmens hands whom I had taken order with about making them, and without doubt perſwaded themſelves that they had the full knowledge of the whole Art. Preſently upon this they were become inviſible and withdrew themſelves, inſomuch that I ſuſpect that thoſe perfidious Men have repaired to the Courts of ſome great Men, to offer and ſell theſe my inventions as if they were their own. Now then to meet with ſuch treacherous perfidiouſneſs, I thought good to publiſh openly ſomewhat concerning theſe matters, that ſo every one may know that whatever Men ſhall ſell ſuch ſecrets as their own, they were not invented by them but by me, and they have fraudulently ſtolen them from me. But I except thoſe here, to whom I have revealed them to this intent, that, *viz.* they may make uſe of them againſt the *Turk*.

And becauſe I can methinks prophetically as it were conjecture that theſe my newly invented military Inſtruments will be deſired and ſought after by a great many both high and low, I judged it a thing worth the while, to take care for the getting ſome of thoſe ſame Inſtruments, and alſo thoſe moiſt Fires thereunto appertaining to be prepared, and ſent into thoſe places, where they may detriment or annoy the *Turks*. For without doubt there may be far ſtronger reſiſtance made with theſe newly invented Inſtruments againſt thoſe our Capital Enemies, than can ever be done with Gun-powder. For Gun-powder is never wont to operate afore it be kindled with the Fire, which kindling and inflamation Water will hinder, and now my moiſt Fires are not at all impeded thereby. And upon this account it is a thing altogether poſſible that a fiery Globe [or Granadoe] may be as well emitted [or be as forcible] out of the deep Waters with [or by] them, as it may with Gun-powder out of the Water, the which ſeems indeed incredible, but yet is very eaſie to him that is endued with the knowledge of theſe things.

There yet reſt a few admonitions to be given, *viz.* that no body paſs his ſentence upon theſe my ſecrets here diſcloſed, with a prejudiced and foreſtalled judgment, unleſs he has a mind to ſlur himſelf with an infamous mark, but let him have patience, till he of his own knowledge perceive the whole Baſis of the buſineſs. Many things there be that lie as yet hidden, which (as Propheſies tell us) muſt be manifeſted before the Worlds end. This time draws nearer and nearer, though ſo few believe it. For my part I am verily of this Opinion, that there is ſuch a wonderfull time at hand, the like of which hath neither been ſeen or heard of from the time of the Floud even to theſe our days. I pray God to Defend the Pious, and to Convert the Wicked, *Amen*.

The End of the Firſt Part.

THE

SECOND PART

OF

GLAUBER'S WORKS.

The First CENTURY,

OR

Wealthy Stoze-Houſe of Treaſures.

BEING

A General *Appendix* to all his hitherto-publiſhed Writings.

The which doth not onely illuſtrate all obſcure places, as well in his Philoſophical and Medicinal as Chymical Writings, and explain thoſe hard places to be underſtood; but alſo do ſo abundantly ſupply thoſe which are defective, that the learned and the unlearned, the higheſt and the loweſt, and more, the meaneſt Workmen and Husbandmen, may ſufficiently be able to comprehend that *Glauber* hath in all his Writings, written the pure and ſimple Truth, and hath again brought to light the moſt noble Art of Alchymy which hath ſo long lain hid in darkneſs hitherto; and hath diſcovered it for the common good of Mankind.

LONDON, Printed in the Year MDCLXXXIX.

THE

SECOND PART

OF

GLAUBER'S

WORKS.

The Fifth CENTURY,

OR

Healthy Stock-Pot of Treasures.

BEING

A General Appendix to all his hitherto-published Writings.

The which doth not only illustrate all obscure places, as well in his Philosophical and Medicinal as Chymical Writings, and explain those hard places to be understood; but also do so abundantly supply those which are defective, that the learned and the unlearned, the highest and the lowest, and more, the meanest Workman and Husbandman, may sufficiently be able to comprehend that Author hath in all his Writings, written the pure and simple Truth, and hath again brought to light the most noble Art of Alchymy which hath so long lain hid in darkness hitherto; and hath discovered it for the common good of Mankind.

LONDON, Printed in the Year MDCLXXXIX.

THE PREFACE.

Courteous Reader,

THAT *every promiſe becomes a debt, is reported by a common Proverb or By-word, and therefore to ſtand to ones word or promiſe, is a thing which procures a great Ornament or grace no leſs to* Juniors *than to* Seniors. *Since therefore in my Writings I have ingaged my Faith or Credit through the promiſing of ſome little Works, and yet have not been able, by reaſon of the ſcantineſs of time, hitherto to ſatisfie the expectation and deſire of very many, by publiſhing of the ſame; yea ſince greater Diſcommodities and Impediments being caſt in my way, do hinder me from day to day whereby I cannot write more things, although I have nothing more in my deſires than that in ſtanding to my promiſe, I may acquit my credit, and ſet forth the ſaid little Works; to wit, my Vegetable Work, my Work of* Saturn, *my Book of Dialogues or Diſcourſe, the fourth part of my* Spagyrical Pharmacopœa *or Chymical Diſpenſatory, and my admirable little Book of the concentring of the Heaven and Earth: truly they being Treatiſes containing moſt excellent Arcanums or Secrets, and the moſt worthy ones whereof Men can be made partakers, notwithſtanding I am of neceſſity deſtitute of time for the writing of any Treatiſe peculiarly, and for that cauſe I am conſtrained to inſiſt in a nearer path, and for the ſake of promoting the publick good, to ſend forth the ſaid Treatiſes in publick by a leſs labour and trouble. The preſent Treatiſe notified with the Title of an univerſal Cheſt or Cabinet full of Riches, or of a general Appendix of all my Writings hitherto expoſed to the publick view performs this, whereby all things which have been either the more briefly and obſcurely ſpoken in them, are with a more clear or perſpicuous illuſtration explained, or things that have been wholly omitted are ſupplied, and by the ſame endeavour the promiſed Treatiſes are added, yet not in that order wherein they ought otherwiſe to be written down, and the which order here to be obſerved, would adminiſter very much trouble; but wherein all the ſecrets have in proceſs of time been made known unto me, and committed to Paper. But it is free for any one to add according to his own Judgment, Medicinal Secrets unto Medicinal ones, Mineral Secrets unto Mineral ones, Chymical Secrets unto Chymical ones, if it ſhall ſo pleaſe him, and time ſhall alſo permit the ſame, which it in no wiſe permitteth unto me, every one that acquieſceth and is content with theſe things may conſider, if a certain Cook ſhould ſet a Diſh on the Table filled with the beſt Meats, as being deſtitute of time, to put every ſort of Meat in a ſeveral Diſh, whether he could of right be angry with him, or by whiſperingly prating, he could dare to ſay, he was to be blamed as being not skilfull in the affairs of the Kitchin, becauſe collecting ſo many delicate and ſuch dainty Meats into one Diſh, and daring to ſet them on the Table? I ſuppoſe not any one could of right complain of ſuch a deed of any Cook; the Cook deſiring to have it taken in good part, ſuch Meats as he had, ſuch he ſets before them; he that refuſeth to take of them, may uſe his own liberty, and may let thoſe Meats alone, which he is not compelled to receive, even as the Cook alſo may be conſtrained by none in preparing of the ſame according to his own will or judgment.*

Whatſoever Meat doth not pleaſe the Pallate of one, yet will not be ingratefull to the Pallate of another, but on the contrary gratefull, ſeeing one Food is wont to ſavour or reliſh this Man, and another the other, neither is he inordinately affected with the diſdain of confuſed Meats, who taketh of thoſe which reliſh him, and leaveth the reſt for others.

Let every one that blameth theſe Writings do the ſame, not in haſtily taking them in evil part, but in friendly and courteouſly excuſing me that I have not ſent them abroad in a more harmonious order.

They are like unto a certain true and great Cabinet or Cheſt, filled with very many excellent Secrets, being reduced into my knowledge through a ſucceſſive diligent ſearch of thirty years and ſo collected into one heap, that they might either be conſerved for my own or at ſome time be made of publick uſe or ſervice: out of this Cheſt every one ſhall be able to exhauſt thoſe Arcanums *and* Secrets, *which ſhall pleaſe him or ſerve his uſes.*

As to what concerns my ſelf, becauſe I daily behold ſometimes this Man, ſometimes that Man being ſnatched away by death, to be carried forth and committed to the Earth, I may eaſily conclude rationally with my ſelf, that thoſe changes or chances will in a ſhort time happen alſo unto me; I ſhould commit a very grievous offence or errour, that ſo many coſts, labours and troubles, of ſo many and ſo great Secrets being conſumed in vain, I ſhould carry them away with me under ground, and not beſtow them for a common good: I ſhall here perform the office of a good Houſe-holder, or skilfull Houſe-keeper or Steward, who after that he hath made abundant of Proviſion for Winter-cloathing for himſelf, his Wife, Children and whole Family, if he hath as yet plenty of Linnen and Woollen Cloth remaining, he doth not caſt them away, but rather caſts them together into a Cheſt, ſo long to be kept, untill he ſhall obtain an occaſion of adminiſtring them for the uſe of his Neighbour. In the name of the Lord therefore, in making a beginning with the opening of my Cheſt of Treaſures, I will empty it out by little and little by degrees, and will offer it for a common uſe, that out of ſo many Treaſures, every one may convert unto his own uſe, what things he ſhall judge to be profitable unto him; to wit, a Phyſician Medicinal things, and a Chymiſt Chymical things, even as every one ſhall diſcern any thing to be fit for his own uſe, every one of what rank ſoever ſhall find thoſe things wherewith he might be content, ſo indeed that whatſoever he ſhall not meet withall in the firſt, ſecond, or third Century may be found in the reſt, for which things ſake, if ten Centuries ſhall not be ſufficent, I will adjoyn other ten or more, that ſo I may remove from me all thoſe cares, and carefulneſſes wherewith the cuſtody of ſo great Treaſures hath importuned and affected me for ſo many years. Like unto a travelling Woman, who with the greateſt deſire expecteth the hour of her delivery, and who deſireth the beholding of her Fruit, do I deſire that time wherein all things ſhall be printed in Letters. The Almighty God beſtow on me ſo much preſence of mind, health, and ſtrength, and prolong my Life ſo far, that I may finiſh it to his Honour, and the Succour, Comfort and Profit of all Mankind. Amen.

In

THE FIRST CENTURY: OR GLAUBER'S Wealthy Store-House of Treasures.

PART II.

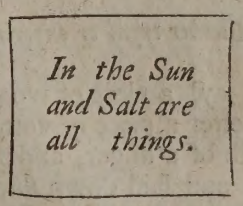
In the Name of the most Holy Trinity I begin to write the First Century of my General Appendix, *or an Exposition of all my Writings hitherto set forth.*

I. *Concerning Fire and Salt, and what Alchymy is.*

ALCHYMY is a Science, and Art of destroying, of purging immature or unripe and impure Metals, by Fire and Salt, and by a singular Artifice, of converting the more pure part into a better form and kind, according to the words of *Paracelsus*, who saith, *Every Something is to be converted into Nothing, and every Nothing into Something.* Also Corruption renders that which is good perfect, the which is to be equally understood of particular and universal Operations.

Nevertheless it is not of necessity that I should here tediously treat of a particular Transmutation of Metals by Fire and Salt, because that hath been already long since performed in the second part of the Miracle of the World, and also in the fifth part of the prosperity of *Germany*.

A Square within a Circle.



II. *A Demonstration whereby it is proved that Fire and Salt are most noble Creatures of God, and that in Fire there lies hid the purest Salt, and in Salt a most efficacious Fire.*

THAT Fire and Salt are most noble Creatures of God I have evidently enough demonstrated in my little work concerning the nature of Salts. But that there is a subtile saltish spirit in any fire, and that between the heat of the Sun, and of our Kitchin fire, as to their saltish spirit, a great difference doth interpose is sufficiently and over sufficiently known. But to comprehend or lay hold of, to concenter such a pure saltish spirit of *Sol*, to render it corporal, palpable or perceivable, and visible, remains hidden and unknown to us by reason of our sins; because God reserves so great mysteries for his own alone, of whom he is honoured and feared: for God himself useth no better similitude than the fire, whereunto the Ancients exhibited divine honour, and by the help of the same, perfected all their Sacrifices: So among the *Caldeans*, Fire, and God are called by one and the same name of *Esch*: and among the *Heathens*, the chief Philosophers, yea *Hermes* himself thought the Sun to be a God, and worshipped it for a God. These things are found expressed by *Mutius* concerning the nature of Gods, and therefore those things are not necessary which may be here repeated. Yet that is well to be noted, that God hath always appeared to his Saints under the shew of fire, and hath talked with them out of it, it being that which is full of the greatest mysteries, yet observed but by a few, as in a peculiar little work concerning the concentration of the Heaven and the Earth I will more plainly and fully declare. I affirm therefore, that it can scarce be, that the admirable, yea incredible nature of fire should be described without the revelatian of the highest or greatest mysteries of God. Therefore it is better that such Secrets are passed by in silence, than that precious pearls should be cast before Swine, who are wont to receive them with laughter, and proclaim that they are nothing but the mere sophisteris of triflers, even as is evidently manifest from the description of *J. H. S.* of the Philosophers Stone, wherein Nature, he saith, makes not use of Glasses, Vessels, Fire, Salt, Urine, and the like in the bowels of the Earth; and the universal *Elixir* may very fitly be prepared by him, who also hath not handled any Chymical La-

bours, or was never buſied about Fire or Salt : Let it ſhame the man of ſuch ſtinking lies, wherewith he endeavours to cover his own ignorance, I on the contrary affirm, that all thoſe that know not how to handle Fire and Salt, do in very deed know nothing, but do give credit unto thoſe things only which they hear, or read in others writings, and alſo for that cauſe are unworthy of the name and title of true Philoſophers ; for true Philoſophy is to be thoroughly or perfectly learned by the help of Fire and Salt alone, the which God willing ſhall be more evidently demonſtrated.

III. *It is moreover demonſtrated, that in all Salts an admirable Fire doth lurk as being laid up therein, through the indeavour whereof very many admirable things may be perfected as well in Medicine as in Alchymy: and alſo that it may be altogether performed, that out of Vitriol the Stone of the ancient Wiſe men, out of Salt Peter a ſpiritual Gold, and an excellent yellow tincture, and out of common Salt the true Pearl of the Philoſophers may be prepared.*

IN all Salts, that a moſt potent Fire doth lurk as being laid up therein, thoſe have beſt known who have the labours of the fire thoroughly viewed and certainly known. For through the efficacy and operation hereof, ſalts are reduced unto a fiery force, or power, or unto a moiſt fire, out of which they before aroſe, after the laying down of their earthlineſs, yet one ſalt draws out one fire far unlike to the fire of another, ſo that this is volatile, the other is fixed, and remaining conſtant in the fire ; another is partly volatile and partly fixed, even as the operation ſhall procure this or the other property unto them, yet all ſuch fiery ſalts may by the benefit of Art be concentred, and made more efficacious than they were made by ſome one diſtillation. For example ſake. If any one beholdeth Vitriol, and conſiders of the nature thereof, he ſhall in very deed certainly find that by the help of, a ſtrong fire, there may be allured or extracted out of it that which was in the beginning, to wit, a fiery ſpirit, which by the aid of external fire, being reduced into a narrow Central room, or Con-centration, draws out that internal fire, uncloathing it ſelf of, or diſplaying ſo great virtues, that it reduceth into a Coal all things which it moiſteneth or encompaſſeth, even like as if it had been burnt up by common Kitchin fire, or by Glaſſes receiving the Sun-beams and burning up all things that are objected againſt it. Concerning theſe fiery ſalts, and the preparation and uſe of them, I being here to deliver a few things, I will take my beginning from the fire of Vitriol, and the preparation of the ſame, the various and manifold uſe whereof ſhall be afterwards explained in its own place.

IV. *Of the Preparation of the Fire of Vitriol.*

RETorts made of the beſt earth do draw out the fire of Vitriol by diſtillation after this manner following.

Common Vitriol is calcined in earthen pots unto a redneſs, and reduced into a powder, it is put into an earthen Retort, and placed in a Furnace, and a great veſſel adjoyned to the neck of the Retort, which is to receive the ſpirits going forth ; the fire is kindled by degrees, and ſo gradually increaſed untill the Retort be brightly red hot, in which degree of fire it is ſo long to be urged untill no white Clouds or little vapoury Miſts do any longer appear. This operation is perfected in 24 hours ſpace at the moſt. But if the Retort ſhall be very large all the Oyl cannot be extracted in the ſpace of 24 hours, but will require a longer time for the operation, which experience it ſelf will determine: after all the Spirits are diſtilled off and ſettled to the bottom of the Receiver, the clay luting which joyned the Receiver to the neck of the Retort is to be mollified with a wet cloth put round about it, and the Receiver taken off, and the ſpirits poured out of it into a glaſs body well coated with Clay, the which (having an Alembick put on) is to be ſet in ſand, that the volatile ſpirit may ſlowly and gently be drawn off, and kept for its uſe afterwards to be taught. Alſo afterwards the phlegm is to be drawn off, and reſerved for its own uſes, becauſe it hath its own peculiar virtues. At length alſo the laſt ſpirit is to be received in a peculiar veſſel, the which, after that it hath ceaſed, and fiery drops do follow, the fire is (by degrees) to be removed, and when the ſand is cold, the gourd is to be taken out, in which (the Alembick or head being taken away) thou ſhalt find a fiery Oyl of a black or ſomewhat reddiſh colour, the which is again to be rectified in an open fire in a Retort well coated, that it may be rendred more fiery and clear.

By this oyl admirable things, and thoſe not only profitable for Phyſicians but alſo for Chymiſts, and other Artificers, are perfected as we ſhall ſtraitway ſee.

There are indeed other ways or means alſo by which this oyl is attained, but this afore taught is the eaſieſt of all, although it require the more time. But if any one ſtand in need of a greater quantity of the ſame, he may procure thoſe greater Cans prepared of the beſt Earth, they being ſo joyned to each other, that the uppermoſt being placed on the fire, the reſt might be placed without the fire, ſo that the lowermoſt may receive the oyl going out by deſcent.

V. *A proof whether this Oyl of Vitriol be well prepared and ſtrong, and fit enough for that operation of which we here treat.*

LET down a quill or ſome ſmall piece of wood into the Oyl, the which, when thou haſt left in it for ſome ſmall time, draw it out ; if it ſhall be burnt unto a Coal the oyl is well prepared, but if not, it is a ſign that ſomewhat of moiſture is as yet therein, which is again to be expelled by fire.

VI. *Another tryal or experiment.*

DIP in the oyl a piece of woollen, linnen, or which is better a piece of cotton cloth extended to the breadth of a finger, and pour on the ſame being taken out and laid down ſome drops of the ſpirit or oyl of Turpentine, the which if being kindled they ſhall conceive a flame it is a ſign that the oyl was well prepared.

VII. *Another further Proof.*

POur into ſome little glaſs ſome ſmall quantity of ſpirit of wine wanting all phlegm, and pour on the ſame ſome drops of this oyl by little and little ; and if the ſpirit of wine kindle and burn all away the oyl is prepared after a due manner.

NB. I admoniſh that every one doth warily handle

dle this operation : for in these two fires , to wit, saltish and sulphureous ones, there is great virtue hidden, the which seems probable but to a few, if it should be manifested unto them, neither that have I consulted or decreed that it should be made known to very many. These few particulars do sufficiently teach after what sort such fires are to be used in Medicine, Alchymy and other Arts; but these experiments are sufficient.

VIII. *Concerning the use of this Fire of Vitriol in Medicine.*

THE use of this fire, as also of the volatile spirit of the same, and of its flegm, thou shalt find described in the second part of my Furnaces, and among other Authours ; so that the repetition thereof is here superfluous, this is onely to be known that this fire being onely besmeared or anointed with a feather on all uncurable and Cancerous or eating Ulcers, kills the Poyson, and causeth that such Ulcers do very easily admit of cure, if so be the Escharre be but first removed by the applying some ointment or emplaister which cures adustion or burning. For this oyl burns up all wild or forreign flesh, and that which (as proud) lifts up it self with an abounding poyson, like unto a certain bright burning Iron, and separates all evil and hurtfull flesh from the good and sound flesh.

IX. *Of the general use of this Oyl in Alchymy.*

BY this mineral fire, all kind of Transmutations of things are perfected, but particularly it exalteth some of the more base metals into a higher degree, and makes them more constant, of which more shall be said in the following Chapters or Treatises.

In the general, some Vegetables, Animal and Mineral subjects, may by the operation of this Oyl be reduced into fixt Medicines, and indeed far more commodiously than by the common fire of Wood or Coals. And moreover which is a far greater thing in this very oyl a fiery Tincture is hidden, and is manifested by the benefit of Art, as Fryer *Basilius*, and other Philosophers do affirm.

X. *Of the use of this fire in other Arts.*

BY the virtues of this invisible, and yet essential fire, all sorts of most profitable matters are performed , the which notwithstanding is not here safe for me to describe, but I am constrained to refer it till another time, it onely in this place seems worthy my labour, briefly to shew that this fire performs all those things which the fire of Coals is otherwise wont to effect.

Truly it is a fire, but it shineth not like the fire of Wood or Coals : But he that will have it to shine, he must needs add unto it a subtile or fine Sulphur, that he may extract or allure forth of it a visible fire.

This fire being defended against the entrance of the Air, remains occult for many thousands of years, and doth not manifest it self, unless any one make it manifest.

Truly it is an admirable fire, and most fit for the effecting of many incredible things, whereof we have spoken many things sufficient for this time.

XI. *An evident demonstration of such a fire lying hid even in the Salt of the Kitchin, and that known to every one.*

AFter that *Plato* and many other Philosophers took notice that nothing endowed with life did consist without Salt,and that dead Carcasses themselves were preserved for a long time from putrefaction by the virtues of the same; they thought and wrote that a certain divine thing lay hid in it. But after what sort this divine and hidden thing is to be made visible, they have not taught. But without doubt, those most wise Philosophers would by this word shew and denote something of a singular excellency.

Because therefore God himself is a fire, and hath never appeared to his Saints in any other shape but that of fire, and besides also all Salts are generated in the moist bowels of the earth from an Astral fire, and on the contrary, a true fire may by the operation of Art be extracted and rendred palpable and visible out of all Salts, it being that which without doubt lay not hid unto them, therefore it is also very likely that those Philosophers have not without a cause of great moment written that a certain Divine or fiery Being did secretly lurk in Salt.

But that they have intimated not any thing to be better, or more noble than that fiery and saltish Spirit may be foreseen by an easie conjecture; for if a certain divine thing shall lie hid in Salt as they write, it shall of necessity follow that that divine spark being freed from all its earthly bonds should be far superiour to all earthly things in beauty, virtues, efficacy and power ; and that next to the eternal God himself it should remain the chiefest and most precious Pearl in the World.

But who shall teach us the manner of separating so precious a Pearl out of the common and Kitchin Salt ? none but God alone, or some good friend ; who can make his friend a partaker of the knowledge received from God ?

But since that very few mortals do seek, love, fear and honour God with sincere hearts, but do much rather cleave fast unto the frail and unjust Mammon , and attribute divine honour unto the same ; its no wonder that God doth reserve those things to himself, or at least doth sparingly bestow on us those things which he abundantly supplyed the Ancients withall from his own bountifull hand : And moreover the same omnipotent Creatour enlightning some fit subject, with a certain spark of nature , grants unto him also so much wit that he knows that by a due silence he is to beware of this wicked dreg or dross of the World. Whence it is no wonder that the light of nature is at this day made known to so few mortals.

But before I treat in many particulars of that precious Pearl of Salt, it seems altogether necessary for me, first to shew the manner and reason of extracting that fire out of Kitchin Salt; the separation whereof can be perfected in no other respect than through the violence of common fire, to wit, whenas the Salt being mixt with a certain earthly matter that it cannot flow, is urged in a retort with a most strong fire, that the more pure part of the Salt, which is nothing else but a sharp spirit , may depart into the Receiver joyned to the Retort , in which sharp and sweet spirit a most efficacious fire lurketh which in manner following is to be extracted and concentred.

XII. *Of*

XII. *Of the preparation of the fire of Salt.*

TAKE of this acid or ſharp ſpirit of Salt, rectifie it out of a Glaſs Retort in ſand; the flegm will come over firſt, which was put in the receiving Veſſel in the firſt Diſtillation to condenſe or collect the ſpirits the more commodiouſly. After that all the flegm is come off, and acid drops begin to come, remove or change your Receiver, and take your ſpirits therein; continue the Diſtillation ſo long untill all the ſpirits be come forth, it being indowed with an acid ſweetneſs, is an effecter of very many operations, which doth bring much profit both in Medicine and Alchymy, as is manifeſt out of diverſe of my writings, and eſpecially out of the 2d. part of my Furnaces, and the comfort of Mariners.

In this ſweet and ſharp ſpirit like Wine there is an infernal fire hidden, which doth equally like Coals burn up all things put into it, like as the fire of wood and coals doth Vegetables and Animals, and it reduceth all things which common fire doth, by calcining them into aſhes, ſuch as are immature metals, tin, lead and the like, which when they are put into it, it burns them up by calcining them into white aſhes.

XIII. *A Concentrating the rectified Spirit of Salt into a moiſt and cold Fire.*

EVery Spirit of Salt conſiſteth of two things, to wit, Fire and Water, which water the fire doth ſo firmly co-knit to it ſelf, that it cannot be wholly ſeparated by any diſtillation or rectifying; but it always adheres to the fire, how often ſoever it be rectified or diſtilled: if any one therefore deſireth by rectifying to ſeparate them he muſt of neceſſity put immature metal-like ſubjects to the Spirit of Salt, the which, by how much the more immature or unripe they are, by ſo much they render the ſpirit of ſalt the purer; ſuch are *Lapis Calaminaris*, *Zink*, and *Iron*, which by reaſon of their moiſt and attracting nature, do draw to them that inviſible fire out of the ſpirit of ſalt, as it were that agent whereof (as to their maturity or perfection) they are neceſſarily deſtitute, and without which fiery agent, a metallick kind of body is able to attain unto no perfection in the earth.

Such metallick ſubjects therefore, the ſpirit of ſalt, they being put into it, aſſaulteth, and as much as it can diſſolves them. This ſolution being diſtilled out of a glaſs retort by ſand, with the more gentle fire, ſends forth nothing but a meer and unſavoury phlegm, the fiery eſſence it ſelf remaining with the mineral in the Retort, the which if it be more and more urged, and the fire more increaſed, that it may become plainly burning bright, then that mineral cannot longer retain the fire of the ſalt, but diſmiſſeth it, which deſcending into the receiving veſſel, is condenſed into a thick and fiery oyl, which is afterwards to be kept in ſtrong and well ſtopt glaſſes, becauſe it fumes without intermiſſion, and deſires to return into the air, as it were its Chaos from whence it came forth.

This fire is the operator of great effects in Alchymy and Medicine, of which effects very few have known how to diſcourſe. But it hath far different properties and qualities from that which is extracted out of Vitriol, whereof it ſhall be afterwards treated.

And although through the help of this fire, incredible things may be performed as well by Chymiſts as Phyſicians, and other Artificers; yet it is a conſuming, deſtroying, and alſo a ripening fire; neither hath it the leaſt of the moſt noble Pearl with it whereof we have made mention above, and the which in this preparation is converted into ſuch a fire.

That Pearl, if it ſhould be extracted or allured out of Salt, in my ſimple opinion it were to be extracted not by the benefit of the fire, but through the endeavour of metallick and attracting ſubjects.

But although I do not profeſs my ſelf to be ſo skilfull a Maſter, and do not arrogate to my ſelf the knowledge of ſo precious a pearl, yet I cannot but bewray that ſmall little ſpark of Nature which God hath granted unto me, that ſo every one may have a clear knowledge and ſight of what admirable myſteries Salt doth hide in its own vile body.

XIV. *The manner whereby that moſt precious Pearl of Salt may at leaſt wiſe in ſome reſpect be rendred conſpicuous or apparent.*

EVEN as I have admoniſhed in my foregoing writings, that the powers, colours, and virtues of all Vegetables, Animals, and Minerals are found concentred in Fire and Salt, ſo alſo I now affirm and aſſert the ſame thing that by Salt through the benefit of Fire, all Vegetables, Animals, and Metals, may in their own ſpecies, nature and properties be increaſed and propagated into an infinity. So that we have the ſeeds of them.

For example ſake. I prepare Kitchin Salt by the fire, that its tartneſs being loſt, it puts on the nature of an Alcali or Lixivial Salt, I mix ſome parts thereof with ſome barren earth, or with naked ſand, the which I moiſten with water, in theſe I ſow the ſeeds of vegetables, that they may be nouriſhed by that Salt and may grow, which in thus growing do obtain their own proper figures, virtues and colours, they appear green, yellow and red, ſky-coloured, purple coloured, and white, *&c.* and have a ſweet, ſour, ſharp, bitter, ſavour, even as God hath beſtowed on every particular kind its own proper nature, which operation proceeds from this one onely Salt, and the fiery beams of the Sun being tempered with air.

When therefore Beaſts are fed with theſe Herbs growing, and receiving nouriſhment from the Salt, they are of neceſſity alſo nouriſhed and increaſed by the ſame; even as alſo the ſame Herbs growing from the ſame Salt do ſupply nouriſhment and increaſe themſelves.

But if any one could obtain the true ſeed of Gold, and increaſe that ſeed by the help of Salt and Fire; he might (without doubt) obtain great plenty of Gold, but God will not have it that the tail of the Goat ſhould be as long as the Cows, the which being lifted up with too much pride, would ſtrike out her own eyes with her too long tail.

If therefore all things and Gold it ſelf, as alſo Silver, Pearls, and precious Stones, are after an inviſible and occult manner hidden in Salt, and may by the help of art and nature be rendred palpable and viſible; why alſo might it not come to paſs that the moſt excellent Medicine and moſt precious Pearl of the wiſe men might be allured forth out of the ſame Salt? Truly common Pearls are bred out of Salt waters, wherein if the firſt matter of Pearls were not, after what manner or ſort ſhould they bewray themſelves out of the ſame? Therefore that it may evidently be made manifeſt, that by the operation

ration of art, also Pearls may be extracted out of Salt which do far excell those Pearls, which by fishing are drawn out of the depth of the Sea, in beauty, virtue, efficacy and excellency; I will prescribe as much indeed as hath been granted unto me, for demonstrating the possibility of the thing, a certain manner whereby every one shall be able to take to him a firm and sure foundation of weighing or considering of the matter more exactly.

XV. *An operation of alluring forth a Philosophical Pearl out of Salt.*

DIssolve thou in common water, as much of common Salt as thou wilt, by how much the greater plenty thou shalt take, by so much the more thou shalt obtain.

In like manner dissolve in *aq. fort.* one or two Ounces of Silver, pour this solution of *Lune* on the dissolved Salt, and stir both the dissolutions up and down divers times, that it may become white and like unto Milk. For Silver cannot well indure the Salt, but departing from it is precipitated to the bottom, and there resides, in the form of a snow-like Powder, which by the effusion or pouring off the water is to be separated and dried.

This silver powder hath extracted a spiritual and philosophical gold, or the said precious Pearl out of the Salt Water. Because *Diana* hath known no less how to fish Pearls in the Salt Sea, than to hunt wild Beasts in the green Woods: But that Pearl is made corporal and visible in manner following.

XVI. *How the Pearl being attained is made visible.*

IT is to be noted that that silver powder being thus by it self, and without an admixture of other fixed Salts, doth very hardly by fusion return into its former form of silver, but that it flows like Salt, and pierceth any vessel whatsoever, yea doth depart into a smoak. For the spirits of the Salt do render the silver so fluid and volatile, that it is made altogether mercurial; and therefore its more tender and noble part may be separated from its more gross part by distillation, if this could be done by glassen, or earthen, or metallick vessels.

When this mercury of *Lune* is melted in an open crucible, it vanisheth into smoak. It being put into a Glass Retort, refuseth to yield to the fire, the which being too much increased makes the glass to melt, and destroys the glass together with the silver. If earthen vessels be used, the same mercury pierceth the same unhurt like oyled Leather, when it departs, the Salts also depart into smoak, and do leave little grains of silver adhering to the vessel, whereof in this respect there is made a loss, which renders the sublimation void.

Of Iron vessels also here is no use, because of the Salts that are admixed with the silver rising up against the Iron, they dismiss the silver reduced to its ancient body, and besides a little spirit of salt they send forth nothing, so that no separation is made, but the pure and impure do remain co-mixt.

For the sake of avoiding those discommodities I have tried many ways and manners in vain, and at length I took notice, that if such a matter be added to the most penetrating mercury of *Lune*, which may so hinder its efficacy of solving and co-melting, that it may be changed into a porous lump, than that, through the benefit of fire there might be an easie separation thereof, which without this help doth most difficultly exist.

In the name of the Lord, therefore adjoyn thou unto thy fishing Net; that is, unto the mercury of *Lune*, such a matter in due weight and measure which admits not of melting, and which suffers not the mercury of *Lune* to conflux, or melt together. Such are wooden Coals being reduced into a fine powder, with the which being mixt with the mercury of *Lune*, thou shalt fill thy distilling vessel, whether it be earth, or iron, or glass which is the best of all, even unto the half part, and shall set it in the fire, the which is to be gently increased by degrees, untill the glass become burning bright, keep the vessel so long in this heat untill all the spirits are departed, which ceasing, thou shalt take away the vessel being cold, in which thou wilt find the remainder of the mercury which did not ascend, reduced into a corporal or imbodyed silver, or at least wise such, to which adding a little borace is easily reduced into silver, the which doth contain somewhat of gold; but keep thou that subtile and pure matter which ascended in distillation as a precious treasure, and meditate after what sort, or by what means thou mayst be able to fix this precious Pearl, and convert it into a fusible, or flowable, and piercing stone.

But in what respect, or in what manner this thing is to be done, in very deed I cannot tell, because I am he who have not hitherto had leisure, nor time of perfecting that thing, and therefore I have been willing here to shew onely these things which I have seen with my eyes, and handled with my hands.

Another shall be able by his own judgment to make tryal, and to see what God will bestow upon him, I have shewn in stead of the mercurial Statue or Image, that which shall suffice at present.

XVII. *A more easie manner of obtaining a Philosophical Pearl.*

IF thou shalt be desirous of obtaining a Philosophical Pearl after a more easie manner, thou must of necessity thus operate.

Unto half a Loton, *i. e.* two drams of the mercury of *Lune*, add a little of the powder of Coals, and put the conjoyned matters into a small glass, the which set in a crucible encompassed with sand unto that height which the matter in the glass it self shall determine. On the mouth of the glass put a small piece of some glass that it may be well covered, and so place thou a less crucible with the upside downward upon that little glass, that its (top) utmost and highest bound being overwhelmed with the said sand may drive away all air from that little glass.

Set that crucible being in this manner co-fitted, and containing the little glass shut up between them in live Coals of Wood, and make them bright burning hot, that that may remain fired for a quarter of an hours space, then let them cool, and thou shalt find a little lifted up by sublimation, the rest being melted by borace, will afford a silver impregnated with gold, yet without gain, the which demonstrateth onely in the space of half an hour, what may be done: but what gain may be obtainted by this very operation shall hereafter be shewn.

Furthermore it is here to be seen how most beautifull a Pearl doth bewray it self, although very little of it come forth, because in this labour no small part thereof flies away into the air, and sheweth onely its colours alone in the glass, far more beautifull than gold, silver, and precious stones; if any one shall

rightly operate, neither ſhall there be any Painter who ſhall expreſs it by imitating and painting.

For this time take what hath been ſpoken in right and good part, and immediately weigh thou ſo great a thing the more exactly, pray, labour, ſeek, and in ſeeking thou ſhalt find ſuch things which thou couldſt never before have believed.

The Brethren of ignorance, my enemies, will here object againſt me, and ſay, that theſe moſt elegant colours have drawn their original from the ſilver: unto thoſe I briefly anſwer, That they were indeed extracted out of the Salt by the help of the ſilver, but that they do not (*per ſe*) or by themſelves pertain to the ſilver, for if they were of the ſilver they would alſo be ſolved by *aq. fortis*, the which, ſince it is not done, they are not ſilver, but the meer *Anima* or Soul of the ſalt. That this thing may be confirmed by a more evident argument, I bring the ſolution of Saturn or Lead, the which it ſelf alſo can fiſh out the ſame Pearl from Salt, without Silver. If any one ſhall operate after the ſame manner which I but now ſhewed, I alſo add this, that I am hereafter to teach a way whereby *Saturn* may be able to fiſh pure ſimple gold out of all ſalts.

Let us now return unto the moiſt and cold fire of the Philoſophers, and ſee what an admirable fire God hath hidden in Salt Peter.

That a moſt potent fire doth lurk in Salt Peter is not worth our confirming by any argument. That horrible Gunpowder which ſhakes or rends all things aſunder proveth the thing moſt manifeſtly, and *Aq. Fortis*, which diſſolveth and deſtroyeth all Metals, yet another fire of far more powerfull virtue is hidden in the ſame Salt, which very few have known and beheld, and the which we will here make manifeſt, for the honour of God, and the profit of all mankind.

XVIII. *Of the preparation of the moiſt and cold fire of Salt Peter.*

TAke of Potters earth being without ſand, and burnt, 2 parts, and 1 part of Salt Peter very well purified, with both theſe matters being reduced into powder and well mixed together, fill a glaſs retort well coated with clay, put it in a Furnace for diſtillation, and joyn a Receiver to the Neck of the Retort, into which put as many pints or pounds of water as there were pounds of Salt Peter mixed with the earth, that the Spirits going forth may ſo much the ſooner be condenſed into moiſture, after thou haſt exactly joyned and luted thy Receiver to the neck of the Retort, with a due lute (or clay) kindle a fire according to Art by degrees, and the ſpirit of the Salt Peter (repreſenting a yellow or red miſt in going forth) will joyn it ſelf to the water placed in the Receiver.

All the Spirits being come forth, take off thy Receiver, and ſeparate them from the watet, put this ſharp ſpirit of Niter into ſome ſtrong glaſs: it being by diſtilation freed from its ſuperfluous phlegm and rectified, is applied unto Medicinal and Chymical uſes: concerning the operations and virtues whereof there is mention made in the ſecond part of my Furnaces, and in the Diſpenſatory of *Schroderus*. Moreover, the manner of extracting and concentring a fire of this ſpiritis this.

Pour this ſpirit of Niter on the powder of *Lap. Calaminaris* or *Zink* reduced into ſmall little grains that it may diſſolve as much as it can: and when it will diſſolve no more in the Cold, place the glaſs in hot ſand that it may diſſolve more of the matter, filtre the ſolution and by ſand draw off all the phlegm in a glaſs retort; the phlegm being all come off, change thy Receiver, and increaſe thy fire and drive out a fiery oyl, which oyl thou ſhalt keep well ſtopt, becauſe it unceſſantly fuming would wholly vaniſh away in the Air.

This fiery ſmoke of Salt Peter, as alſo that of Vitriol, and common Salt, burns up all Herbs, Graſs, Leaves and Flowers, and whatſoever it toucheth, juſt as if they were burnt with a ſtrong heat of the Sun or Fire.

And this is the preparation of the moiſt and cold fire of Salt Peter, of the uſe and efficacious operation whereof in Medicine and Alchymy, it ſhall be more exactly and fully treated on in the following Chapters.

XIX. *Of the moiſt fire of Allome.*

ALlome alſo by the work of Diſtillation and Concentration yields an efficacious fire moſt like to that of Vitriol, in efficacy and virtues, but the plenty doth not anſwer by reaſon of too much earth wherewith it abounds, yet if ſomewhat of the other Salts be added unto it, it rightly and orderly beſtows its fire.

XX. *Of the moiſt and cold fire of Sulphur.*

ALthough Sulphur finds not a place in the order of Salts, becauſe it refuſeth the ſolving in water, yet it contains a vitriolated ſalt laid up in it, which doth not manifeſt it ſelf before that the more fat ſubſtance thereof ſhall be withdrawn by inflaming, by the operation whereof the ſalt is attenuated or made thin, and is carried on high by the flame like a ſharp ſmoke, ſo that this ſharp ſulphureous ſpirit burns all things which it toucheth, after the manner of all thoſe fires which are drawn out of ſalts.

For the attaining this vitriolated and ſulphureous ſpirit the flame of the ſulphur is to be received, in a certain Alembick made of glaſs or earth, peculiarly for this operation, wherein that vitriolated ſpirit of ſalt condenſeth it ſelf, and iſſues forth like a thick fat, and fiery oyl, not unlike to that which is made of Vitriol, whereof it is treated on in my Furnaces.

All theſe things do very evidently confirm thoſe particulars, which I have many years agoe committed to memory: concerning Sulphur and Vitriol, to wit, that Sulphur is the original of all metals, and that no metal at all is digged out of the earth, which hath not either Vitriol or Sulphur, or for the moſt part both adjoyned unto it, for no ſulphur is deſtitute of vitriol, nor vitriol of ſulphur, ſo that both of them do challenge the riſe or birth of any kind of metals whatſoever unto themſelves. And every ſulphur is by its own proper agent or vitriolated ſalt, which it hath in its poſſeſſion by nature (whereto the central fire of the earth is an aſſiſtant) excocted or boiled up more and more into a metal; neither doth this univerſal agent or vitriolated ſalt depart from the fatneſs, or its patient, untill the fatneſs together with the agent ſhall depart into a malleable metal, or a metal that undergoes the hammer. Lead, iron and copper, do make this thing manifeſt, which metals do never appear without vitriol and ſulphur, and that for this cauſe; becauſe they being as yet unripe and imperfect ones, do ſtand in need of their agent.

A leſs

A leſs plenty of Sulphur or Vitriol is found with ſilver, than with Copper.

Gold hath little of Vitriol or Sulphur, yea plainly none at all, if it ſhall attain to its higheſt maturity, becauſe it is then found to be pure and malleable, and wants not a further fuſion or melting, but by how much the more of Copper, Gold, and Silver have, by ſo much the more of Vitriol or Sulphur they have, as alſo require the more time for their ex-coction and perfecting.

From theſe particulars, it manifeſtly appears in what reſpect metals may in a long time be generated in the bowels of the earth by their firſt principle, namely Sulphur ; and may be ripened to perfection, by its own Salt, or agent, which it hath in its poſſeſſion.

If nature doth effect this in a long time, why alſo may it not come to paſs, that art ſhould perform the ſame in a ſhorter time?

But let theſe things that have been ſpoken be ſufficient, he that underſtands not, nor alſo perceiveth the ſcope or mark, which I ſo clearly ſhew is blind, and doth not admit of a remedy for his blindneſs.

Truly I judge theſe few things, (but yet ſuch as ſhew a moſt long way with a moſt ſhining Torch) to be ſufficient concerning the moiſt and cold fires of minerals, by which the ripening and perfecting of metals, are to be perfected as well by nature in the bowels of the earth, as by art above the earth.

N. B. If therefore a mineral may by the help and impulſe of its own vitriolated Salt, wherewith it is endowed, be ripened from its vile form and loweſt degree unto a better, and at length unto the beſt of all, that is, unto the pureſt gold, it being that which none (that is ſeaſoned but with the leaſt knowledge of natural things) will deny.

Alſo if ſuch a Sulphur is hidden in any vegetable, which anſwers to a mineral Sulphur in its nature and properties, why alſo might it not come to paſs, that this ſame Sulphur might be perfected into mature gold, alike equal to the other? from hence it moſt evidently appeareth that in any Herb, although the moſt abject one, which is promoted by the Sun unto its maturity, a ſpark of the immature beams of *Sol* may be found, which through the operation of art, are to be changed into pure gold. But after what manner ſuch a Sulphur may be extracted out of any Herb or any Wood whatſoever, in all things like to a mineral one, I have long ſince delivered in my little work concerning the nature of Salts, and in the ſecond part of the *miraculum mundi*, and below I will demonſtrate by a much more clear manifeſtation.

Let us proceed to Animals and Vegetables, and conſider whether in theſe very things, ſuch a ripening fire may be found, and may from thence alſo be drawn and made viſible.

But we muſt know that no ſmall living creature or ſmall Herb can grow, live, and receive, increaſe without a certain fiery and Salt Agent ; the which although it cannot be believed by any one that is lifted up with pride, and of a ſtupid brain, yet it in very deed exiſteth, and can eaſily be demonſtrated by the hand of the Artificer.

XXI. *A moſt powerfull manner of extracting a fire out of any Wood, or any Herb whatſoever, and of rendering it palpable and viſible.*

FILL ſome glaſs, ſtony, or earthen diſtilling veſſel with any dried Wood or dried Herb, and diſtill off the Vinegar or ſharp liquor from thence, and ſeparate the Oyl from it ; and pour that ſharp liquor on *Lapis Calaminaris*, *Zink*, or aſhes of lead, which matters do diſmiſs all the unſavoury moiſture in diſtilling, and retain the whole ſharpneſs with themſelves, the which being diſtilled from thence aſcends like unto meer fire, it being of great uſe as well in Medicine as Alchymy, whereof mention ſhall be made hereafter.

But here it is to be noted that this fire extracted by diſtillation, is onely a part of that fire of the Wood and Herbs, and that the other part remains in the Coals thereof, which is far more fixed than that which aſcended, and is that Sulphur which we ſpoke of but now, which wholly anſwers to the nature of a mineral Sulphur, and which may be extracted out of the Coals being ſolved by *Sal. Mirabilis*, which ſhall be taught and manifeſted in the following Chapter.

For if there were no fire in them, after what ſort ſhould they burn and draw out heat ? all Coals being converted into aſhes, after that their hidden Sulphur hath done its office, the feces of the Wood remains like dead aſhes, wherein as yet lies hid a certain ſingular vegetable fire, being altogether of another nature, and wholly contrary to that which aſcendeth in Diſtillation. This water being extracted out of the aſhes preſents a *Lixivium*, the which by decoction exhaleth all the moiſture, and leaves the reſt a fiery Salt, whereof in the ſecond part of my Diſpenſatory. If it be made hot without fuſion, or melting, it becomes the more fiery, ſo that it being bound to the skin for ſome hours in the bigneſs of a pea, it burns a ſmall hole therein as if it had been burnt with a bright burning iron. And therefore Chyrurgeons make uſe of ſuch fires that they may open unripe Ulcers, or make Iſſues.

It may be ſeen by theſe particulars that in any Wood or any Herb, there are alſo fires of divers kinds, the which alſo are found in living creatures, they being partly volatile and ſharp, and partly fixed, and obtaining the nature of *Alcalies* or *Lixivial* Salts.

Both Salts or Fires, after they are conjoyned they loſe their fiery nature, and get unto themſelves another quality and property ; to wit, a middle one, and theſe two contrary fires become an eſſential tartarous Salt, and ſweet in uſe, wherein no fire appears, although that fire being turned out and in by art, may be again extracted and made viſible.

Concerning theſe wonderfull changes of nature, and converſions out of one ſpecies or particular kind into another, many things are found up and down in my writings. In the firſt part of the continuation of the miracle of the World, it is manifeſtly deſcribed after what ſort a plenty of ſuch fire may be attained out of Woods, but the concentring thereof is here delivered. In general it is here to be noted, that one Wood or one Herb doth more abound with ſuch a fire than another. But by how much any Wood or Herb is the elder, and by how much the longer the Sun-beams have operated on it, by ſo much the more of fire is in it, as is manifeſt from the Vine ; which hath received plentifull Rays of that ſort, and therefore excells all other vegetables in the greater and ſtronger fire, as appears not onely by the burning ſpirit, but alſo the tartar, or tartarous Salt thereof, which is almoſt all fire, and yet without Diſtillation and Calcination it cannot be manifeſted.

That therefore it may be brought forth into open view,

view, and be rendred visible, we must make use of the following operation.

XXII. *The manner of manifesting the fire of the Vine.*

FILL thou a Glass Retort with common Tartar, and distill forth the volatile spirit and oyl, the which thou shalt separate after a due manner. Great virtues are in this oyl, whereof I have made mention in the second part of my Furnaces. The spirit is to be rectified in B. that the fiery substance onely may depart, and the unprofitable flegm remain behind; the rectified spirit is to be poured on the fixed Salt, (residing in the Retort, which must be first calcined by a strong fire and made fiery) and from thence again distilled, that the fixed Salt may retain the rest of the unprofitable flegm, and the spirit attain the greater fiery virtues for the performing of wonderfull effects in medicine, the which my writings do teach.

XXIII. *Another manner of extracting or drawing forth a far more stronger fire out of Tartar.*

DIssolve thou that Alcalizated Salt from which the spirit was abstracted in rectifying in a little water, that it may become a very sharp *Lixivium* or Lye; pour one pound of this *Lixivium* on two pounds of white Tartar in a Gourd, and that being reduced into powder, put on a head which being well luted on with clay, set it in sand and kindle a fire by degrees, if thou shalt rightly work thou shalt obtain a most subtile fire, one drop whereof doth burn the tongue, as if it had been touched with a burning Iron.

How wonderfull things may be effected by this fire, I have already shown in other places of my writings.

XXIV. *A manner of drawing forth as yet a more vehement fire out of Tarter.*

TAKE of crude Tartar and the *Regulus* of *Mars*, or the purest metallick part of iron, the *scoria* being separated, equal parts, the which thou shalt mix by beating together, put them in a crucible with a cover so well fenced with clay that it may admit of no air, keep them in a bright burning fire for the space of an hour, then take them away.

From all these particulars it is made known to every one that a vehement fire lies hidden in vegetables readily serving for the effecting of many admirable things in Medicine, Alchymy and other arts, from the declaring whereof the shortness of time and this treatise, commands us at this time to cease. But moreover we must see whether living creatures also are potent in the same fire, and in what respect any one may be made partakers of the same.

XXV. *The preparation and Con-centration of fire out of Animals.*

AS the Vine is the most noble of all vegetables, so man also is esteemed by all that are indowed with judgment to be the most noble of all Animals, or living Creatures; the truth whereof the thing it self affirmeth by a plentifull Testimony.

Therefore we pass by all other Animals in silence, and do here shew (by the following manner) the preparation of that fire onely that lies hid in Man.

The Ancient Philosophers have called the great World, *Macrocosmus*, and man as it were the lesser World, *Microcosmus*, and a comparison being made, they have determined that what things are found in the great World, the same are to be found in the lesser World, that is in Man.

From whence also they unanimously believed, and also committed to memory, that as well the life of the greater, as of the lesser World, doth consist in a saline and saltish spirit, and that this spirit doth bear rule in one place more, in another less. Neither is there any one also who will or can deny, that the whole earth is filled with Salt, as it were its Balsam; and that minerals are alike equally bred thereby in the very bowels of the earth, as vegetables are in the Superficies.

Yet notwithstanding the Salt of the great World is no where more plentifully found than in water, or in the Seas; the which as it is a thing most known, it needs no confirmation. The same thing is to be understood concerning the little World, *viz.* Man, and although the whole body in all its parts abound with their true Balsam, yet a greater plenty of this Salt and Balsamick spirit, is found in his flesh than in his bones, a greater plenty likewise in his bloud than in his flesh, but the greatest plenty in his Bladder, or in the Salt Sea of the lesser World, the which is hidden to none, but it is the custom not to seek necessary things in remote places, but in places nigh where they are most easie to be found.

Hence because a more plentifull Salt is no where found in man than in his Urine, we of right lay hold on an occasion of seeking and con-centrating the fire in the same, and we make use of the following preparation.

XXVI. *The operation of preparing a fire out of man's Urine.*

I Have at large delivered this operation in the second part of my Furnaces, whither I refer the Reader; where he shall not onely find a manifold composing of this fire, but also its various use in Medicine.

But although it be needless to describe that operation there repeated, yet it seems meet to me (for a more evident declaration's sake) here to adjoyn some admonitions which concern it.

XXVII. *Observations which concern the preparation of an Animal Fire.*

SUCH a fire is for the most part drawn forth out of man's Urine being putrified by it self for the space of some weeks, and is by rectifying converted into a moist and fiery essence as the second part of my Furnaces sheweth; I have there taught a more easy manner of drawing forth the same fire out of *Sal-Armoniack*, which is prepared out of Urine, and by the addition of a strong *Lixivium* it is distilled and rectified.

I have also taught the manner of preparing the same fire out of *Sal-armoniack* by the Addition of *Lapis Calaminaris*, by distilling it through a Retort.

Spirits rightly prepared after these manners are equally profitable in Medicine, Alchymy, and other arts; because they are those which being well made are all of them good, after what manner soever they may be prepared.

But although these volatile animal fires do readily serve for the performing of famous and notable things (and the fixed Salt of Urine it self, may by Distillation and

and rectification be con-centrated into another kind of fire) yet they are at a far diſtance from that true Philoſophical fire which the Ancients have hidden with ſo great care and diligence, becauſe that in theſe preparations the beſt and chiefeſt part of the fire flies away and is loſt. But this I ſay, that theſe fiery Spirits of Urine being con-centrated even as I have taught them to be, are indeed able to effect all thoſe things which I have attributed to them, and ſhall as yet attribute. But indeed they do not coagulate the con centrated fire of the Vine, which coagulation is not the leaſt key for the compoſing of an univerſal Medicine.

For when the Spirit of Urine attains this nature, that by coagulating the moſt ſubtile Spirit of Wine, (when poured on it) into a Salt, this Salt extracts the ſoul of Gold duely prepared; the which alſo, if it be changed by it ſelf, and converted into a dry and ſweet Salt, and be fixed, poſſeſſeth the virtues of a Medicament of a moſt famous and great uſe in Medicine.

Every one that is illuſtrated, but even with the leaſt light of nature, ſhall be able by an eaſy buſineſs, to ſmell out what may hiddenly lurk under this Salt.

From the moſt pure Vine is the ſubſtance of the Spirit of Wine, which ſtrengthens the heart of man beyond all other things, as alſo his brain, and other members.

The Spirit of Urine is the pureſt and moſt ſubtile Mercurial Animal Salt, not having its like in penetrating, opening, and reſolving.

This ſubtile Mercurial, Animal and piercing fire therefore, being joyned to the moſt pure vegetable, that is, the Spirit of Wine, that it may be changed together with it into a dry Medicine, any one ſhall be able by an eaſy conjecture to foreſee what it will effect in Medicine.

But that I may make manifeſt the errour, and demonſtrate the cauſe wherefore a Spirit of Urine is ſo ſeldom prepared, which will coagulate the Spirit of Wine into a Salt, I admoniſh that a reſpect be had by every one of the following particulars.

For firſt it is to be taken notice of, that the moſt ſubtile part onely of the Spirit of Urine, and not the more groſs part, is fit for the coagulation of the Spirit of Wine: If therefore in the preparation of the ſame, the moſt ſubtile part ſhall be loſt, through the negligence or ignorance of the operator, it can in no wiſe be brought to paſs, that the more groſs and dreggy part ſhould cauſe that coagulation.

But that moſt ſubtile Spirit doth not onely vaniſh away in diſtillation through an inſufficiency of the Luteing not being good, but alſo a great part of the ſame is loſt before diſtilling, to wit, when the Urine being ſucceſſively gathered, is conſtrained to ſtand and wait too long, ſo that the Spirit by little and little exhaleth and departs into the Air, eſpecially when it is gathered together in the Summer or Winter time, for that fire not being patient of any extreme, is expelled by a little heat or cold, and therefore the fitteſt times for collecting the ſame are the Months called *March* and *May*, or *September* and *October*, in which Months the Air is temperate, neither too hot, nor too cold, thoſe Months therefore are the fitteſt for collecting and extracting of an Animal fire out of it.

Furthermore, *Calx-vive* or *unſlaked Lime* is to be added to the Urine (when putrified) and diſtilled, that the inſipid water may be ſo much the more eaſily or readily ſeparated from that volatile fire, the which is not done if it be diſtilled *per ſe*.

I would not paſs by theſe few things in ſilence for the ſake of the Reader, and of him that is ſtudious of good Medicines: But after what manner Metals may be amended by this Animal fire is not here ſhewn, but God willing ſhall by and by in the following Chapters. But we put an end to the preparation and con-centration of Animal and Vegetable fires, with theſe ſayings, whoſe admirable virtues and faculties in medicines, Alchimy and other profitable Arts, ſhall here be manifeſted in order, as much as time will permit.

Look I pray you on the Elementary Sun, as alſo on the fire of woods, and the virtues of light, and the virtue of both, the which all creatures, and eſpecially mankind it ſelf, is conſtrained to make uſe of for their own ſafety; could even the leaſt graſs bewray it ſelf? or any ſmall worm be bred and live without the *Sun*? could any workmanſhip or artifice be exerciſed without the help of common fire? the which, if it were not, we ſhould be conſtrained to eat unboyled Herbs, and raw Fleſh like wild Beaſts: yea, the whole converſation and negotiation or traffique among men ſhould be wholly taken away, if earthly fire and light ſhould be wanting unto us.

If there were ſome one man onely in ſome whole City or Province, or in a whole Kingdom, who alone could make others partakers of fire and light, would there not be made the greateſt concourſe of all men unto him? but becauſe it is known to every one, and every one hath known by an eaſy manner, how to ſtrike it out of flints, it is had in no eſteem, for it is cuſtomary not to eſteem thoſe things which are made common, although they are pretious. The ſame thing hath happened to the fire, the which although it ought to be made of greateſt account, yet it is reckoned of no worth becauſe it is common and vulgar.

But even as the common fire, and that known to every one, doth by very many moſt profitable operations bring much good to mortals, who can leaſt of all want the uſe thereof; ſo alſo I affirm that thoſe artificial and hidden fires are to be very much accounted of, becauſe a Phiſician can hardly be without them, for the preparations of efficacious Medicines, and a Chymiſt can never want for the tranſmutation of the more baſe metals into better, either of them without the aid of thoſe fires ſhall perform nothing of any great moment in Chymical Labours.

He that works and is ignorant of ſuch fires, what will he effect in metallick operations? he being converſant in cold and darkneſs is afflicted with the ſame difficulty, as a certain brewer or baker is, who wants wood in the winter ſeaſon, or who is not able to uſe water, it being congealed into ice, the one he cannot bake although he hath the beſt meal, and the other brew drink although he have abundance of the beſt malt.

So alſo goes the matter with Alchymical Affairs, the want whereof cauſeth that we handle not the moſt noble Alchimy with any profit, but rather receive loſs from the ſame, daily experience being witneſs, that 100 are wont to be ſooner undone than that it happens to any one man to get himſelf riches thereby. The blame of which diſcommodity is not to be tranſferred on an impoſſibility of the art, but rather to be imputed to the want of thoſe moiſt, cold, and

ripening fires extracted out of Salts, the which after what sort they ought to be used for the amendment of metals, as also for medicine and other arts, shall be taught partly in this, and partly in the other Centuries.

XXVIII. *The general use of our concentred fiery and ripening Spirits, extracted out of Salts, in the amendment and converting of metals into more noble ones; also the preparation of many excellent medicaments, and the increase and amendment of many other arts, are briefly here demonstrated; the which, God granting, shall more largely be declared in their particular use.*

THAT I may discourse in few words whether imperfect metals may by the operation of the more common and gross Salts, and of the fire be broken, destroyed, cleansed, and reduced into a better form, it being that which the fifth part of the prosperity of *Germany* confirmeth by divers experiments.

I affirm that the pure Spirits of Salts, do with a greater efficacy, and far better effect the same, the which, since those simple Spirits are able, better and more easily to perform than gross Salts, why should not also con-centrated Spirits after the best and easiest manner of all perform the same thing?

From a like reason the use of Salts shall not be of so great efficacy in the preparation of medicines, and other arts, as the useing of common Spirits is; the which, notwithstanding being still for the most part clogged with much phlegm, do of necessity not disclose so great virtues, as those con-centred fiery Spirits do which are freed from all phlegm.

The Sun-beams are for an example which do not send forth so great heat, when they are co-mixed with a moist air, as also green and wet Woods do not so vehemently burn with heat, as withered and dry ones are wont to do.

Yea if the hot beams of the Sun are con-centred in or by some hollow glass increasing the fire, or the fires of Coals by a strong blowing of the Bellows, and are as it were constrained into straights or narrow passages, they effect ten times, yea one hundred times more than those which are not centred together after such a sort. But by how much the more strictly those forces of the beams of the Sun, or of other fires are con-centred by so much the greater, stronger, and sharper heat they draw out.

A burning glass of one foot Diameter, onely enflames Wood; but one of two foot Diameter will melt Tin, Lead, and other metallick matters of that sort, which are easie to be melted, as *Bismuthum*, or the whitest, lightest, and basest kind of Lead, *Zink*, the non-splendent metallick dark matter *Koboltum*, &c. But if you extend the Diameter to four foot, the Sun-beams taking the stronger increase will melt silver and copper, and will render iron it self so bright burning hot, that it may be wrought with a hammer, as if it had been heated with Coals. This effect is to be ascribed unto the con centring of the Sun-beams by an instrument, and to the constraining of the heat of Coals, by Bellows, or Wind.

The same thing is to be understood concerning our con-centred and moist fires, which ought to be compared, not onely with the common beams of the Sun, or with the heat of Kitchin fire, but also with those Sun-beams which are con-centred by a glass, and with the fiery heat of Coals constrained or forced by windy blasts. Whence they must of necessity be of greater virtues than the common Salts, and watery spirits of them, the which the more quick sighted will sufficiently comprehend and believe Simple Countrey People do see this thing with their eyes, and handle it with their hands, as well knowing that the subtile, hot, sweet Spirits of Wine and Ale, (and those procuring strength to the heart) when they are freed from all moisture by Distillation, and con centred by Rectification; effect ten fold more than if they had still remained with their humidites.

That thou mayest understand the thing more clearly, well weigh thou Grapes, Bread-corn, or the Fruits of Trees, which we eat in that substance as the trees bring them forth unto us: and they afford us a nourishment, but not such a one, as their juice being pressed out, and separated from its dreggs, and by fermentation reduced into a clear and sweet drink.

If necessity compell, Bread corn may be used for nourishment as it is, yet not so well as when it is separated from its husks, being changed into meal, and reduced by water into a mass or lump, and Salt and Leaven added, and by Fire concocted or digested into Bread of the best Savour. By the same reason Bread-corn being boiled in fair water yields a potion indeed somewhat better than the water it self, but if it be artificially handled, and boyled up into Ale or Bear, the husks are separated from the more pure juice, the which afterwards by fermentation, separates many dreggs from it, and arrives to a more noble nature, yielding a sweeter and better drink. But if the same juice be after that brought by distillation into a greater purity, and con-centred together by rectifying, that the virtues thereof may come into a narrow compass, (because it is a meer fire) it will exercise far greater virtues, than gross Bread-corn which wants a power of exercising so great virtues.

So also doth it succeed with con-centrated Salts, to wit, when the dreggs are separated from them by the help of art, and the more pure parts converted, and con-centred into a fiery substance, performing effects of great moment in Alchymy. But that Salts do commonly destroy metals, as well by a moist as a dry way, is known to every Barber, and persons of no reputation. But after what manner metals being destroyed may be reduced into more noble bodies than they were before, there hath been none hitherto (who being skilled in that artifice or craft) that have not hid it with the greatest care. Hence it hath come to pass, that nothing of profit hath been perceived from metallick transmutations, and Alchymy it self hath been made a mock of by the most unskilfull rout of ignorant ones, as if it were most false, and at the fartheſt distance from truth.

That this doubt therefore may be taken away, and the truth it self may be more evidently placed in our view, I have resolved in my mind, by God's assistance, to place before the eyes of the whole world, a true and profitable transmutation of metals, by a clear description, and to assert the certainty of so many writings set forth by such men, by the most true experiments, so that every one that is seasoned but even with a light or small knowledge of the fire, may by an easy business hereafter obtain some profit from them. But I will first treat of common and crude Salts, and then of the simple Spirits of those, and at length of their con-centred Spirits and Fires, which we have taught to extract out of them.

But before I attempt to describe and assert this kingly and noble art, I have been led first to shew the cause why some places do occur in the descripti-

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on of the same, wherein words are omitted, and signs or blanks reposed instead of the same.

Indeed this was therefore done, that the art may be concealed from the unworthy, and they in all respects to be driven from the same, and may be made known onely to Adeptists, and the Sons of Art.

Besides also that all secrets may not in all places, and without difference be divulged, but that the chief things thereof may be preserved for friends, lest they be trodden under foot, and broken to pieces by the unworthy, but that they may be left to friends as it were a certain secret stroak, and that an unknown one to others, for to fight successfully.

I therefore earnestly require of every one by a friendly Petition that he be not suddenly angry, if he be not able clearly to perceive, by the sharpness of his wit, all those things which I propose, but rather let him consider that they are not written for him, but for others; by whose capacity they can be perceived. Neither is it altogether necessary that all do know all things, neither also would it be of concernment if friends and enemies attain all those things in their understanding alike, without any difference, which I here openly produce by my descriptions; it is sufficient that some onely, and indeed those that are worthy may clearly and knowingly possess the same, and testifie the truth.

XXIX. *An infallible practice of changing the more imperfect Metals into more perfect ones by the help of crude Salts.*

AS I have already a little before, and also in other places of my writings, evidently enough demonstrated that Salts, or the spirits of Salts, are in the earth, or out of the earth a universal Agent, promoting the maturation or ripening of metals: So here I again firmly affirm the same thing, and do say, that by Salts the gross bodies of metals are destroyed, and transchanged into more noble metals, and that indeed after divers manners, and that more easily or difficultly as any one shall be more or less conversant in Chymical labours.

I will hear God willing make manifest all things, yet not to every one, but to the worthy onely; and that indeed after the manner of a Clock or Watch-maker, who taking some Clock or Watch in pieces, do lay up all the parts thereof in some place without any order; the which he that is unskilfull in the art, shall never again compose and reduce into order. But another who before hath handled that art, will by an easie labour again conjoyn all those parts, and reduce them into the former body of a Clock or Watch.

All those therefore who have experienced the foregoing labours to be perfected by the fire, shall by these my descriptions easily dispatch or accommodate themselves in future things, not easie to be understood by the rout of ignorant persons which have made no experiments in the fire; who will in vain look into those things which I have written; no otherwise than as if any one being plainly unskilfull in reading and writing, should behold written letters, and knows not what they signifie, or what argument they may contain: Such a man if he would be angry with the writer, should he not do him much injury, because as being far remote from the fault of that ignorance which hinders him, whereby he cannot read these letters which he had never learned to read.

The same thing must be understood concerning my writings, which are openly published, not for the sake of any one, but onely of those who have first learned to understand those kind of writings.

But that I may set upon the thing it self, and may teach the amendment of metals for the better, and shew the very foundation of the whole business, I say, that a true changing of them is attempted in vain, unless they are first destroyed, and wholly slain. A grain of Wheat, as Christ himself saith, will never increase or multiply, unless it first putrifies in the earth. If therefore metals ought to be destroyed by Putrefaction, that must needs be done by the help of Salts, according to the truth of the Philosophers Maxim: the corruption of one thing, is the generation of another. The death of one thing, is the life of another. Since therefore metals must die, it must needs be that death be brought on them by enemies, or contrary things, because nothing in natural or artificial things dieth, unless it be slain by its own enemy.

Since metals therefore ought to be destroyed, and killed by their enemies; it is of necessity that they are invaded, tortured, and so long vexed by the same, until the Agent as the stronger part, be overcome by the Patient as the weaker part; that it be slain by it, [or rather the Patient be overcome by the Agent,] and be translated into a better nature, in which action the Patient ought not to depart from the Agent, but to be tortured with an un-intermitting torment.

Whosoever seeing his enemy and conceives himself of the weaker force, indeavours as much as in him lies to decline him, by retreating, but all occasions of running away and slipping aside being taken away, he is constrained to deliver his life to his enemy, who handles the Patient or suffering party according to his own pleasure, and doth whatsoever he will, therefore after the same manner is the melioration of metals, the which although they should be melted together with Salts their enemies, yet would they make little account of them, but would separate themselves from the same; so that every part of them being unhurt, would keep its own nature and essence. But if the Salts do take away the occasion of flight from metals, and do inclose them in their Prisons, that they have no way of escaping, but remain, suffer, and die, then they obtain victory over the Salt, and of slain metals are made more pure and better.

This thing is done in the fire by the moist and dry way, of which enough hath been spoken already.

This is the whole and intire art, and there needs no other superfluous teachings; yet he whom these things doth not suffice, let him read the following operations thorough, wherein he shall find truth, and see with his eyes, and handle with his hand; those things which have been heretofore impossible to him, and very many more.

XXX. *After what manner Metals may be slain by their enemies and be transmuted into better.*

UNTO Metals not one but many enemies are adverse; and part of those enemies are enemies to some and friends to others, but the other part is friendly to some, and at enmity with others. For example sake.

Nothing more prosecutes Gold with an hostile hatred than burning Sulphur and sulphurious Salts, such as are Alcalies, and crude tartar; the cause of this hatred is, because Gold is nothing else, but a fixed

ed Sulphur, and therefore it disagreeth by a capital hatred, with every burning Sulphur; Silver and Lead do love every *Sulphur, and all sulphureous Salts, such as are Vitriol, Salt Peter, Salt Armoniack, and the like*, the which they stand in need of for their colour; they have an hatred against *Kitching Salt, because it is of a mercurial nature*, and therefore not requiring its help, but onely desiring a Sulphur and Tincture, *Copper, Iron, and Argent vive*, or Quick-silver do possess both natures, to wit, *a mercurial and sulphureous one*, and for that cause they prosecute all Sulphurs, and any Salts with love.

Tin is an enemy of all Salts, whether they are sulphureous or mercurial ones, when it is slain by Sulphur and Salt, and recalled unto life, it obtains a more pure and thin or fine body, whether of Gold or Silver, according as it shall be handled.

Moreover, if any should desire to obtain as yet a better essence out of better metals, its necessary that he slay them by their enemies, and raise them up again by their friends; by how much the greater and vehement the enemies are whereby metals are slain, by so much the more those metals do suffer, and with so much the more famous and better bodies do they re-arise.

The whole art therefore consisteth in this, that metals are overwhelmed by their greatest enemies, are slain by them, and after death are separated from them, and that by their best friends, are restored unto a better life.

Thou hast the whole art, neither doth any other thing remain than that thou attempt the matter, and set to thine hand.

For example sake, I will add an operation. Slay a light metallick matter by the sharp Spirits of sulphurious Salts, that it may become a white calx; free this from the Salt Spirits, by water being poured thereon, the which being freed, cannot be reduced into a metallick body by any violence of fire. Likewise slay mercurial metals as are B. by mercurial, Salts their enemies, and change them into white calx's, the which being freed from their saltness, *will be liquid or flowable*; mix those calx's, to wit, the mercurial and sulphurious being slain, put them into a double vessel of cement, cover the uppermost with a certain plenty of B. fence well the juncture of the cementing vessel with clay, set them into a cementing furnace, and at the beginning administer a gentle fire, that the calx's may rise up against or assult each other, and the fixed sulphur may bind the fugitive flowable and mercurial calx's, D. for although in the cement something would depart into smoak, yet that is intercepted by E. and after a certain manner is thus exalted into the degree of F. Too much fire is not presently to be joyned to the cement or plaistering it self, that some time may be granted to the matter that is swift of flight, whereby it may adjoyn it self unto the fixed matter, and may also become fixed and constant with the same for four hours space, therefore the fire shall be somewhat the more slack, and afterwards for the space of eight or ten hours, it shall be kept in a clear bright burning heat, that G. may not melt: the said time being ended, the fire is to be extinguished, and the cementing vessel to be taken away, in G. a black or brittle body shall be found containing Silver, the easy separation whereof we shall afterwards hear.

The calx of both metals being coagulated into a hard stone, if by grinding it be reduced into powder, and be put into a furnace fit for this thing, a metallick body will be attained, being impregnated, not with a little Gold and Silver, especially if the metals shall be slain, not by the Spirits of common Salts, but with gradatory martial waters. In this cement, H. is rendred aureal or golden, and I. is silvery, by one and the same endeavour. The profit also it self is of no small moment, especially if this operation be exercised with the greater quantity, and the bigger instruments alwaies to supply or afford Silver being pregnant with Gold for separation.

XXXI. *A brief and compendious manner of extracting and rendring corporeal, a volatile Gold out of coloured Flints, Red Talck, Granates or Red Marble Stones, Sand, White Clay and the like metallick earths.*

AT the beginning, these mineral or metallick earths are to be made bright burning hot, to be quenched in cold water, and to be broken in a mill, into meal or powder.

After that they are thus broken, thou shalt put them into some Waldenburge, or Cullein Can, and shalt pour so much of *Aq; Regis* on them, that they may onely be moistened, and let them, together with the Can, be placed in a fire of coals, and incompassed therewith, to be made hot; after that the minerals and *Aq; Regis* have waxed well hot tother, so much hot water is to be poured on those very minerals as shall be necessary for the extracting of the *Aq; Regis*.

Put the minerals thus moistened with the water into great pots, and those made of the best earth, having many little holes in the bottom, on which lay paper for sustaining of the minerals that they may not fall out through the holes, but may dismiss the water onely. After the first water is gone forth, other hot water is again to be poured on, and this effusion of water is so long to be continued, untill it depart with the very same sweetness as when it was poured on, and no longer offers any sharpness to the tast. So the common and hot water brings away with it the *Aq. Regis*, and the *Aq. Regis* Gold out of the minerals.

The earthen pots may be placed in a bench bored thorough with holes, through which their bottoms may pass, that so the water may be received in vessels set under them.

N. B. The minerals may also be put into barrels or hogsheads having a double bottom, such as are used for the cleansing of Salt-Peter, that so water may be so long poured on them, untill all the acrimony be extracted by the water.

XXXII. *After what manner out of Minerals being extracted, a true Salt-Peter may as yet be gotten with profit.*

THE minerals being, after the said manner freed by extraction, they are to be co mixed with an equal weight of *calx vive* and wood ashes, and cast together into an heap under some open gallery or room, that now and then it may be moistened with Urine, or in want of that with Rain-water, as oft as they shall be dryed.

In this operation the *Aq. Regis*, which remained in the minerals, and was not wholly extracted by the hot water by the help of the Urine or Rain-water, changeth the Salt in the *calx-vive* into the best Salt-Peter, the which may be washed off with Rain-

Rain-water, and boiled up after the wonted manner.

Therefore after the ſaid minerals have been handled for half or a whole year after the ſaid manner, and are by rinceing deprived of the Salt it ſelf; they may again be (under an open Gallery or Roof ſo expoſed to the air, that Rain come not at it) collected into an heap and be handled after the former manner, for the ſupplying (in their own time) new Salt Peter, the which may be done for many years together. So alſo from that *Aq. Regis* which could not be drawn forth from the minerals, a profit is received.

The cauſe of this Salt Peter, its being made, is this, becauſe the *Aq. fortis*, or *Aq. Regis*, or Spirit of *Nitre* in the ſame Waters, contains as it were the ſeed of Salt Peter, it obtains that nature, that like an Herb it may take an increaſe from other Salts, and be multiplied; whence perhaps the old proverb aroſe, to ſow Salt, which thing the ignorant have received with mock, ſaying after what ſort can Salt be ſown and multiplied, when it is ſolved and drawn from Rain-water? But it hath lain hid from thoſe, what kind of Salt it is, and after what manner it is to be ſown; the which we have here demonſtrated, alſo the ſaying of the Ancient Philoſophers, aſſerting that Salt may be ſown and multiplied like Vegetables.

As to what pertains to thoſe ſharp waters, whereby gold is extracted out of minerals, by what skill they are to be handled as alſo without loſs, yea that they may render that gold with profit; the following operations are to be obſerved.

XXXIII. *A way ſhewing the extraction of a volatile and fixed Gold out of the Water, from which the Minerals are withdrawn, and the profit which may be received by that Water.*

THE beſt way is this, into the ſolution of gold, or into the water which containeth gold, pour in the ſolution of *Lune* or *Saturn* more or leſs, even as you ſuſpect more or leſs of gold to be in that water: As for example. Let there be in the water two or three half ounces of gold, diſſolve thou therefore about two or three half ounces of ſilver, or lead, in *aq. fortis*, and pour this ſolution into the water containing the gold, be it more or leſs, mix them well together by ſhaking or ſtirring, that the water may obtain the form of milk; after they have ſettled in quietneſs, ſhake or ſtir them again, and repeat this motion for divers times the ſpace of one hour, and at length ſuffer all quietly to ſettle to the bottom. Separate all the clear water from the ſediment by pouring it out, and ſtrain the ſediment it ſelf through a filtre, that the water may be wholly ſeparated from the ſilver.

This ſilver is to be dried, and reduced into its former body, after the manner which ſhall by and by follow.

N. B. If the ſilver or lead had not extracted all the gold, the which may eaſily happen, yet that gold is not loſt, for becauſe ſweet water whereby the *Aq. Regis* is weakened is preſent, the which now remains unfit for another uſe of extracting out of minerals; now by the ſolution of *Lune* or *Saturn* deprived of their gold, a ſharp *Lixivium* made of wood-aſhes, and *Calx-vive* may be poured on the ſame, with which a little is to be added or admixed. For do precipitate or fix all gold in ſolutions.

After this manner the *Aq. Regis* is killed, and every metal which it has yet retaineth, it diſmiſſeth like a yellow powder, whether it be gold alone, or mixed with copper or iron, which powder is to be dried, and reduced after the manner which ſhall ſtrait-way be taught.

N. B. That the water after the total precipitating of the metals, being exhaled in a Copper Kettle unto a thin skin, and expoſed in peculiar veſſels unto the cold, it will afford thee a beautifull Salt-peter, concreted or grown together into drops or Ice-acles, whereof thou may'ſt again make an *Aq fortis*, to be again made uſe of for the like operations.

He that ſhall rightly operate ſhall get ſo much Salt Peter as will recompence the charges of the *Aq. fortis*, and *Aq. Regis*: So that he ſhall extract his gold without coſts. For five or ſix pounds of *Aq. fortis*, wherein two or three pounds of Salt is diſſolved, and the which hath at length been precipitated by a ſharp *Lixivium* prepared with *Calx-vive*, doth render ten pound of Salt Peter, the which doth anſwer the price of five pound of *Aq. fortis*, and this is the manner of extracting gold out of minerals without coſt.

XXXIV. *Another and better manner of extracting gold by Aq. Regis.*

TAKE of by torrifying made into aſhes, pour the extraction into an iron Pot, and ſtir the *Cālx* with an iron *Spatula* while it boileth. All the ſharp ſpirits do ſtick faſt to the the phlegm alone vaniſheth by exhalation. When therefore the ſpirits are wholly con-centred with the and are dried, they are to be put into a cloſe Tigil or Crucible upon Coals in a ſecret Crucible or melting Pot, then the fire expels the con centred ſpirits into a receiving veſſel; the which ſpirits may be uſed for a new extraction. A fugacious gold mixt with iron, remaineth with the which Calx being reduced in a Furnace fit for thoſe operations, which the *Germans* do call *Stichofen*, draws out a lead mixt with gold, the which being expelled by a Cupel enricheth the operators with the beſt gold and ſilver.

N. B. But if ſuch lead ſhould not contain ſo much of gold and ſilver, as that it ſhould deſerve a ſeparation by a Cupel, that is again to be mixt with and to be reduced into aſhes, and the operation is ſo long to be repeated, untill the lead being rich enough in gold, may deſerve that ſeparation.

The ſeparation is alſo to be perfected with the Bellows, leſt ſo great a plenty of lead ſhould be melted out of the Teſts, which operation requires much fire, yet the lead may be collected or conjoyned in the Teſt without a waſtefull melting, as ſhall be taught hereafter.

XXXV. *An eaſie making or compoſing of Aq. Regis, for extracting of minerals.*

BEcauſe a plenteous quantity of ſpirit of Salt is eaſily prepared, the Salt Peter is onely to be diſſolved therein, and with that ſolution minerals are to be extracted. For the Salt Peter ſtrengthens the ſpirit of Salt, that it can ſo much the more eaſier ſet upon and ſnatch to it the tender gold in thoſe minerals.

The ſame ſpirit of Salt, may alſo without any rectifying be adminiſtred for this operation, to wit, ſuch as aſcends in the firſt Diſtillation.

XXXVI. *Another as yet more eaſier way of preparing Aq. Regis for extraction.*

BEcauſe ſilver doth always in this operation bewray its being impregnated with gold, which is to be ſeparated by *Aq. fortis*, the ſolution of ſilver is alſo fitly uſed to extract after this manner.

Pour the ſaid ſolution into *Aq. Regis* which hath extracted gold, that the ſilver may attract the greateſt part thereof to it ſelf. But the ſame *Aq. Regis* may again extract other gold, and be attracted by the ſolution of ſilver.

But if there ſhould be no ſolution of ſilver in readineſs, the gold extracted is con-centred with and the operation is perfected by the means or after the manner aboveſaid, by driving the ſpirit out of the and by reducing it in a Furnace, called by the *Germans Stichofen*, as was ſaid before.

N. B. Aq. fortis being diſſolved therein, or poured on or into *Aq. Regis*, or the nitrous ſpirit of Salt, it adds an increaſe and ſtrength to the *Aq. Regis*, becauſe *Aq. fortis* doth corroborate the ſpirit of Salt better than Salt Peter.

XXXVII. *How the Calx of ſilver, which hath fiſhed out gold by Aq. Regis, is to be recovered.*

WHEN the ſolution of ſilver is poured into *Aq. Regis*, and the chiefeſt part of the gold is extracted; reſt is ſo long granted unto it, that the Calx of the ſilver may ſettle to the bottom, and afterwards the *Aq. Regis* by pouring it forth is ſeparated, cleared from the Calx of the ſilver, again to be uſed for a new extraction; unleſs perhaps as much of iron had been admixed with it, in which caſe the white Calx of the ſilver is put into ſome Cloath laid in an earthen or glaſs Tonnel, and hot water is to be poured on it, to take away with it the *Aq. Regis*, which is left in the Calx of the ſilver. The remaining water is to be preſſed out of the Towel or Cloath, and the Calx dried, and reduced in the ſecret Crucible, or is made uſe of in the con-centring of into ſilver or gold, *viz.* gold and ſilver

XXXVIII. *After what manner precipitated ſilver is to be reduced without a loſs of its weight.*

SEeing the greateſt fugacity is procured unto this Calx of ſilver, ſo that its former body cannot be reſtored unto it in common Crucibles without great loſs, this diſcommodity cannot after a more convenient manner be prevented than by that which ſollows.

Mix thou an equal weight of with this volatile Calx, and caſt it into a cloſe bright burning Crucible, that is narrow above, and broad beneath; the which after thou haſt covered with a Cover, and well fenced with the lute of Wiſedom, thou ſhall melt the matter together, nothing whereof ſhall depart into ſmoke, neither ſhall ſo much as the leaſt of it pierce through the Crucible, and all the ſilver which the gold received is by this means attained without any loſs.

This ſilver thou ſhalt by fuſion reduce into grains, and ſhalt ſeparate the gold from the ſame in *Aq. fortis*. And thou ſhalt again apply the ſilver thus reduced unto a new labour, in which labour thou proceeding without intermiſſion ſhalt have a continual ſeparatory operation of gold and ſilver; and this labour thou mayeſt exerciſe with great profit in all places.

XXXIX. *Another manner of reducing a fugacious or volatile ſilver, with greater profit.*

PLace thou at the Stern of this little golden Ship, a little fiſh whoſe name is *Remora*, that it may be ſpoiled of its ſwiftneſs and may be at a ſtand, caſt this ſilver little Ship with the little fiſh *Remora*, ſitting at its Stern, into a cloſe and ſquare Tigil or Crucible, that by fuſion they may depart into one body. In this fuſion not onely all the ſilver is returned without any loſs into its former body, but alſo is by the white *Finns* of the little fiſh, augmented with a certain increaſe of its weight, and becomes more golden; ſo that by this additament more of better ſilver is gotten, than if by the addition of other things it had been reſtored to its former body.

What other profits any one may be able to obtain through the help of this volatile ſilver, we will God willing hereafter teach.

Theſe are the things which I at this time have been willing to teach, concerning the extraction of a volatile gold out of ſtones, and the more poor minerals, as alſo of the extending or bringing forward ſilver by ſucceſſive degrees into gold; of which matter more things ſhall be ſpoken in other places.

XL. *An operation, teaching to extract Stones and Minerals, or Mines that are poor in Silver, and Copper by a moiſt way.*

THeſe matters being made bright burning hot, are to be quenched with water, then moiſtened and extracted with *Aq. fortis*; after the ſame manner as was taught above concerning the minerals of gold, and no difference is here met with but in the waters extracting, ſince gold is extracted with *Aq. Regis*, and ſilver with *Aq. fortis*.

If the minerals or mines of gold and ſilver are at once in readineſs, the gold is extracted by *Aq. Regis*, and the ſilver by *Aq. fortis*, and the ſolutions are to be united, in which diſſolving, the ſilver being precipitated by the *Aq. Regis*, doth alſo ſnatch with it the gold from the *Aq. Regis*; and although copper ſhall be preſent with the mine of ſilver, and it be extracted together with the ſilver by *Aq. fortis*, yet it is no impediment to the operation, for the ſilver and gold do ſink to the bottom, and the copper is retained by the *Aq. Regis* to be afterwards adminiſtred for a new operation, and that indeed as often as any one ſhall be willing.

The copper is recovered from the *Aq. Regis* by thin plates of iron being put therein, which operation makes the *Aq. Regis* red, and wholly unfit for the like labours.

Therefore the iron being then ſpiritual, promotes ſomething out of the lead unto the degree of gold, and ſo the *Aq. Regis* being thus often uſed, it is again rendred profitable.

XLI. *A more easy manner as yet by far, of plentifully extracting Gold and Silver out of poor mines, as Sand, White-Clay, and other the like minerals, by fire without fusion.*

THE mine or mineral *Argilla*, or White-Clay, *&c.* containing a volatile and fixed Gold, being rosted or calcined, and broken in pieces in a mill, fill thou a glass gourd therewith fenced with clay, or made of the best earth, half full, and pour so much of the following *menstruum* on that matter, as that it may be well moistened: but as soon as that *menstruum* is poured thereon, it presently begins to give a smoak, wherefore it is altogether necessary, that thou presently put a head on the gourd or body, which is to be set in sand, and all the moisture separated by distilling, and that while the distillation is performing the gold may be dissolved, but the solving matter it self is to be collected in a receiver by it self, the which hath the virtues of *Aq. Regis*, and may be again applyed for use, as shall by and by be shewn.

After that all the humidity is come forth, take the gourd (being cold) out of the sand, and pour some water on the matter that it may become soft, and that a Salt may be extracted from it, wherein the Gold lurketh, which was contained in the mine; coagulate the Lixivium being full of Gold, into a Red-Salt, the which by adding Litharge, is to be melted in such Crucibles which are not broken.

The Litharge draws the Gold unto it out of the Salt, which is to be separated from the Lead, after that manner which shall be shewn in the following Chapters or Treatises.

XLII. *The preparation of a Water necessary for the extracting of Gold.*

TAKE of

this water of small charges, which thou shalt prepare plentifully without trouble, pour upon mines, and again separate it by distillation, to be again used in new labours, that there may be no need to prepare it again anew, because this doth not onely alwaies remain effectual, but also is increased in every operation: So that thou mayest be able to extract mines and minerals *ad infinitum*, if so be thou shalt prepare but one pound or pint at the first.

N. B. By this means all Gold how little soever it be, is plentifully extracted out of flints, sand, and any other minerals, without any cost excepting fire.

XLIII. *Another water for extracting silver.*

TAKE

this water extracteth silver out of the poor mines of silver, sand, and stones; the operation of the same, is like the former one, and its increase is like the increase of the former water, so that after this manner silver may be plentifully extracted out of poor minerals, and no other cost is required besides fire.

N. B. Instead of may be taken since it performs the same thing in extracting, which the other performeth.

XLIV. *Another easie manner of plentifully extracting gold and silver out of poor minerals, it being of little or no cost.*

MIX thou the mine or minerals with the requisite waters, fill with the same of good earth, set them near each other in a great put it in and distill the spirits, which pay all the charges, and which supply gold and silver without any costs, the which is to be received by lead.

XLV. *Another more easie manner of extracting gold and silver out of minerals.*

MIX the mine or mineral with the requisite waters, and moisten it by degrees, cast the whole into the spirits depart into a receiving vessel, and in the time of distillation, the gold and silver are dissolved by that dissolvant, the which being extracted, remain with or among and are rinced by water out of the mineral, so that they are attained without costs, and the spirits being collected in the receiving vessel, do recompence all charges.

XLVI. *An easie operation of plentifull extracting gold and silver out of fat white Clay or Potters-earth.*

ALthough gold and silver be extracted out of minerals by moist waters, by a troublesome operation as we have taught in the beginning, yet such an extraction brings no small profit, because they may be freed from those waters by precipitation; and those very waters do readily serve for the making or preparing of Salt Peter. With a fat Argilla or white Clay, the matter goes otherwise, because the spirit hath crept into the fat earth, and scarce a half part is received, unless the earth be first deprived of its fatness by making burning bright, it being that which doth also require its own peculiar labour.

Seeing that therefore in all places of the world, whereso ever earth is found, such fat white Clays containing gold and silver do plentifully offer themselves, and none hath been hitherto found, who hath indeavoured to extract and bring them to use, especially whenas they contain but little of gold or silver, not able to defray the charges of the lead bestowed.

I could not but open a very easie way of performing that thing with no small profit, the which is perfected by the following labour.

Mix such an earth containing gold or silver, with or of that greater one, and cast it by degrees into my first or second Distillatory Furnaces, and draw forth the spirits by distilling, that the solved gold or silver may remain in From that which is broken by a Mill or grinding is washed off with hot water, and is reduced by lead as is shewed before.

XLVII. *After what manner by the help of art, gold may be easily and plenteously extracted from the sand of* Granates, Agaths, Saphyrs, *and* Rubies, *and other stoney Mineral earths, which do neither admit of fusion, nor Lead, nor sharp Waters.*

IT is certain that all *Granates* or Marbles, the red, black, ash-coloured, duskish, also of whatsoever colour

colour they are, or whereſoever they are found, whether in Brooks or Rivers, or in Sand, or fat Earth, or in high Rocks, do always contain much of Gold, but that by reaſon of their glaſſy nature, they cannot be tamed by *Aq. fortis*'s, and by reaſon of their moſt difficu't fuſion cannot be wrought by Saturn or Lead; for that cauſe they have made none partaker of their gold, and they have been neglected as unprofitable earths, whenas notwithſtanding they being handled by little labour, they are able to afford much gold.

Some one therefore may ask, becauſe they cannot be ſubdued either by lead or *Aquæ fortis*'s, what courſe muſt be taken, that gold may be extracted out of their bowels? I anſwer.

and alſo by a Fuſible

they may be ſo overcome, that the gold which they have may be withdrawn from them with profit, for becauſe they can bear the fire, they are and perform by a double labour, one through their ſharpneſs, and another by reaſon of a ſtrong fire, ſo that nothing is ſafe from ſo great forces, but all things are conſtrained to yield unto ſo great violence. Hence they do willingly afterwards enter the Salt of Lead, and in time of melting do readily draw out their gold.

XLVIII. *A moſt firm demonſtration, that ſharp Waters and Salts after the manner of the ways hitherto deſcribed, do draw forth more Gold and Silver as it were without coſt, out of Mines or Minerals containing Gold and Silver, than ſumptuous or coſtly melting Fires.*

IT is not unknown to every one that is ſeaſoned but even with a mean knowledge of gold-bearing Mines, that without the addition of Lead or other flowable things, Gold can in no wiſe be melted out of them, whenas therefore there is little Gold in thoſe, and nevertheleſs much of Lead or other matters is required to be added for an eaſie fuſion or melting ſake, who ſhall be fit for the undergoing of ſo great coſts? Hence it hath come to paſs that ſuch poor minerals could bring nothing of profit in common.

It being alſo granted, that there is ſo much of Gold and Silver in Minerals, that they will defray the charges of fire and fuſion, and afford Gold and Silver with profit, yet ſuch operations are not comparable to my inventions uſing Waters and Salts, no more than as Water to Wine, or Night to Day.

For firſt, fuſion or melting far exceeds in its coſts the extraction which is perfected by Salt and Waters. And then it can never be brought to paſs that fuſion ſhould expell all the Gold and Silver out of Mines and Minerals, but leaves ſome thereof in the droſſes, next alſo there is made a loſs of all the volatile Gold and Silver, which are caſt forth by a moſt ſtrong fire, and driven away into the air; on the contrary, of the more ample and wealthy profits, which the extraction of Gold and Silver out of Minerals bringeth, this is not the leaſt, that not onely all the Gold and Silver which is fixed, is drawn out without any detriment or loſs, but alſo thoſe two metals being as yet volatile are extracted at once and made fixt and conſtant in the fire, whenas notwithſtanding by the vehemence of a melting fire, they are wholly diſperſed and reduced into nothing. For the Waters of Salts do fix the volatile fugative ſpirits of Gold and Silver, the which by the vehement blaſts of Bellows, are rendred as yet far more volatile, ſo that by the help of fuſion ſcarce half the Gold is gotten which the extraction by the Waters of Salt affordeth.

Add to this, that not onely all the Silver and Gold, as well the volatile as the fixt is gotten together without any loſs, but alſo the charges of Coals are far leſs, and one operatour may perform as much of this extraction of Gold and Silver, as three in the labour of fuſion or melting.

From hence it is eaſily to be ſeen, how much profit and fruit may be gained by this my moſt excellent invention in all places of *Germany*. For this extraction is not onely for extracting Gold and Silver as well out of rich as poor Mines, but alſo ſnatcheth out all the Gold and Silver, in Flints tinged with any colour, wherewith all Brooks, Rivers, and Fields are filled

Now follow ſome particular tranſmutations of the imperfect Metals into more perfect ones, by common fire, and Crude Salt, and by the not common concentred moiſt fire of Salt.

XLIX. *A fundamental and evident demonſtration, that a true tranſmutation, or tranſ-changing of Metals may be exerciſed in all places of the earth, whereſoever Men may dwell, yea in the leaſt Cottages of Countrey folks, and indeed by the ſame matters and veſſels which are found in them.*

IT is well known, that even the pooreſt and vileſt or meaneſt Countrey can want neither fire, nor ſalt, nor earthen veſſels, neceſſary for the boyling of Meats. Therefore being furniſhed with Salt, a piece of Copper of ſome old Kettle ſhall eaſily ſupply him, the which it ſhall be free for him, by fire and ſalt to tranſ change into a better and more noble body, but becauſe Man hath a far better and commodious Salt for the tranſmutation of Metals in his poſſeſſion, which excells common Salt in its goodneſs, he may of right and worthily make uſe of his own proper Salt before a ſtrange and foreign one, and that after this manner.

Boil thy own, or the Urine of another man, to the conſiſtancy of Honey, in which decoction, all the unprofitable moiſture of the Urine departs by exhalation, and the Salt thereof remains in the Kettle or earthen Pot; admix thou with this condenſed Urine, ſo much of *Calx-vive*, or the aſhes of burnt Woods, that it may come into a thick or groſs lump. But thin plates of Copper cut in pieces, and purged by making them bright burning hot ought to be in readineſs, and alſo an earthen Pot having its Cover, wherein let that maſs of Urine, and *Calx-vive*, together with the thin plates of Copper be put; when thou haſt all theſe things in a readineſs, mix the Urine as aboveſaid with the *Calx* or ſlack-lime or aſhes, and fill thy Pot to the height of three or four fingers, upon which put ſome of the plates of Copper, and ſo *ſtratum ſuper-ſtratum* till the Pot is full, then cover it with its Cover, which thou ſhalt well fence with Lute made of Meal, Water, and Paper, that not any vapour at all may come forth. For aſſoon as the *Calx-vive* is mixed with the condenſed or cothickned Urine, the ſpirit of Urine begins to operate by its own proper efficacy, and therefore it is neceſſary that the Cover be ſtraightway laid on the Pot, and be fenced with a due Lute or Clay; the Pot being thus filled and cover'd, ſet it aſide in ſome certain place for the ſpace of half a year, in which time

time the ſpirit of Urine being ſtirred up by the *Calx-vive*, diſplays its virtues on the Copper, and exalts it into a higher degree, as that it is tinged of a skie and green colour mixed, and is rendred fit for the Painters Art; one pound whereof is more worth than two or three pounds of Copper, one pound whereof doth for the moſt part render one pound with four or five ounces of this colour, and and ſo it affords a profitable tranſmutation of Copper.

L. *After what manner, out of this partly Green, partly Skie-colour of Copper, Gold and Silver is to be ſeparated.*

HE that deſires to ſeparate Gold and Silver out of this colour, whereof no great maſſes are attained, but onely and alone whereby it is demonſtrated that the thing may be done, he muſt uſe the following operation.

Firſt, he muſt take good heed in taking the colour out of the earthen Pot, leſt any thing of the maſs of the Urine, and *Calx* be mixed with the beautifull colour, and render it impure.

The thin plates being taken out, they are to be often crookedly bowed, and moved upwards and downwards, that the colour may fall off from the plates like ſcales. The remaining Copper which is not yet turned into colour, is reſerved for a new labour; to be repeated after the ſame manner. Wine-vinegar is poured on the colour, or the ſharp water of Tartar extracted after the Diſtillation of aduſt Wine from its Lees, with water by decoction, and it is to be ſo long boiled in a Copper Kettle, or an earthen Pot glazed, till all the colour ſhall be ſolved; the ſolution being caſt into a Filtre, the Vinegar or Water of Tartar onely paſſeth through, and a reddiſh powder is left in the Filtre, the which being melted with Lead in a Cupel, after the exhalation of the Lead, it leaves a grain of Gold. For the ſpirit of Urine hath ripened ſomewhat of the Copper into Gold, which the Vinegar or Water of Tartar did not diſſolve but left, attracting onely the Copper by ſolution. And becauſe ſomewhat of Silver is ripened in the Copper through this ſame operation, and is diſſolved with the Copper, by the Vinegar or Water of Tartar, ſomething of common Salt is to be added to the Water of Tartar or Vinegar, that the Silver may not be ſolved by the ſame, but may remain with the *Calx* of Gold, and may be retained with the ſame.

N. B. Pure and clear Vinegar ought to be taken for this labour, if you would preſerve the colour unhurt, for after ſome part of the Vinegar is evaporated away, the green colour of the Copper grows together into fair green ſmall ſtones, one pound whereof is more to be eſteemed than five or ſix pounds of Verdi greaſe, which is ſold in the Shops.

This artificial operation therefore affords a beautifull and chriſtalline vitriol of *Venus*, and ſome ſmall quantity of Gold and Silver; whereof although there be not ſo great plenty that it may bring profit, yet it ſhews the poſſibility of the thing, and teacheth that a tranſmutation of Metals, may be exerciſed in any ſmall Cottage by any Countrey Man.

But if any one ſhall collect Urine, and extract from thence the volatile ſpirit of its Salt by Diſtillation, he ſhall far more deeply pierce the heart of the Copper, and ſhall obtain more of Gold and Silver than he can get by the but now mentioned ruſtical labour, of which matter more things are found in other places of my Writings.

LI. *After what ſort pure Gold may be extracted out of any Copper.*

IN all Copper a ſpiritual occult Gold lies hid, the which in the labour of ſeparation by Lead in a Cupel or Teſt, is not taken notice of, or conſidered. But this very Gold is nothing elſe but the colour of Copper, ſo firmly adhering unto its body, that it remaineth very difficult to be ſeparated from thence; but the operation being rightly inſtituted, although it be not gainfull, yet it demonſtrates a poſſibility of the thing, for the ſake of experiencing whereof, to wit, whether there be Gold in all Copper, thou muſt labour after the following manner.

Diſſolve Copper in *Aq. Regis*, and pour much water on the ſolution, that by this water the diſſolved Copper may be largely diffuſed. Into this ſolution diffuſed by the water, pour Lead that is diſſolved in *Aq. Fortis*, ſo that one or two half ounces of Lead may anſwer to one pound of Copper. But as often as the Lead ſhall ſettle to the bottom, thou ſhalt ſhake or ſtir it, that the ſolution may be well mixed, and that the Lead may attract ſomething of Gold; and may precipitate it with it ſelf to the bottom, the which being dried and ſeparated in a Cupel, will leave a ſmall quantity of Gold, not for an argument of profit, but a token of a poſſibility, which teſtifies that there is Gold in all Copper. But if any thing of profit were to be received, ſuch Copper was to be taken which was already changed into vitriol. But among vitriols the *Hungarian*, *Cyprian*, *Indian*, *Japanick*, and other the like do excell, which do offer themſelves in the Mines of Gold-bearing Copper, and are handled after the following manner.

LII. *The manner of extracting Gold out of natural vitriol.*

DIſſolve thou vitriol in common water, and pour on the vitriol diſſolved, a littled of diſſolved Lead, and ſtir both ſolutions by frequent motions, that the Lead may attract the Gold out of the vitriol, to be dried and ſeparated by a Cupel, which will remain like a grain of greater or leſſer quantity, as the vitriol ſhall contain more or leſs of the ſame.

Of the vitriolated water out of which the Gold was extracted, thou ſhalt again make vitriol by ſo long boiling, and evaporating till a thin skin appear, which being then expoſed to the cold will ſhoot into Cryſtals. But this operation brings with it more profit, if it be not now boiled up into Cryſtals, but that vitriol onely be taken which is drawn out of its Mineral into Water, and after the extraction of the Gold, is at length boiled up into vitriol.

But leaſt this fiſhing of Gold out of vitriol ſhould ſeem wonderfull unto any, we will ſhew a way, whereby Gold may be extracted out of Sea Water, or Sea Salt, the ſolution of Lead aſſiſting: The manner is as followeth.

LIII. *After what manner Gold is to be extracted out of Sea Salt, or Sea Water, not indeed with profit, but onely that it may be demonſtrated, that Gold is hidden even in Sea Water or Sea Salt.*

FILL a great Copper Kettle with Sea Water, and pour thereon a little diſſolved Lead; the which

goes to the bottom becauſe it cannot indure Salt, and is ſtraightway precipitated into a white powder, move and ſtir the water in the Kettle often, that the ſolution of Lead may every where touch the Sea-Salt-Water.

Through this action, a ſpiritual Gold adheres to the leaden powder, and ſinks to the bottom together with it, which powder being freed from its Salt by common Water, and dried, and melted in a Cupel, leaves a ſmall grain of Gold, as a remainder.

N. B. For this fiſhing Silver is more fit than Lead.

LIV. *How, out of poor Mines of Copper, from which no profit can be perceived, Copper, as alſo Gold it ſelf if it be preſent, is to be eaſily and without coſts, extracted and ſeparated.*

THE ſandy or ſulphurous Mine or Mineral of Copper is to be roaſted or calcined, by burning even to the conſuming of the Sulphur, becauſe ſharp waters do not aſſault ſulphureous matters, the Mineral being calcined and beaten into a powder, fill a gourd, and pour our ſolving ſecret on the ſame, the which I have taught above at the extracting of Minerals.

The whole diſſolvent in abſtracting or diſtilling is recovered, and that indeed not without increaſe. But the Copper and Silver do ſtick faſt in the diſſolved Salt, which remained in the Mineral after the abſtraction, and the which is to be waſhed out with water, out of which water, which drew out that Salt, the Gold contained therein, may by the ſolution of Lead or Silver, be drawn forth.

But if the ſame water be boiled untill a thin skin appear at the top, and expoſed to the cold, it will ſhoot into a green vitriol, but for the extracting the Copper out of the Salt-Water, Rods of Iron are to be put therein, which do attract the Copper, the which being withdrawn and waſhed clean, and melted into Copper by fuſion, is adminiſtred for other uſes: For becauſe it is like to a tender and filed powder, it is changed by an eaſie buſineſs into Verdi-greaſe, after the manner which ſhall by and by be taught.

LV. *After what manner Gold may by an eaſie buſineſs by Fire and Salt, be ſeparated out of Copper.*

IF Gold ſhall be mixed with a maſs, or lump of Copper, all the Copper is to be reduced in a bright burning Fire into Aſhes: and the Aſhes are to be infuſed in our ſecret *Aceum* or Vinegar, the which diſſolveth the Copper onely by decoction, and leaveth the Gold undiſſolved, like a ſhining powder, to be dried and melted with Borace, out of which Gold of twenty three Carats proceedeth.

That Vinegar, our ſecret *Aceum*, draws all the Copper from the golden *Calx*. The Copper is ſeparated from the Vinegar by Rods of Iron, being laid therein as we have taught in the foregoing manner.

LVI. *How Copper being extracted out of vitriolated Water, and adhering to Rods of Iron, is to be changed into Verdi-greaſe.*

THIS pure Copper may be moiſtened with the ſtrongeſt Vinegar, and put into earthen Pots, the which being covered with its Cover well fenced with Clay, are to be placed in Horſe-dung, and to be left therein for a time, yet ſo as that the heap of Dung be ſometimes renewed. All the Copper is in a ſhort time changed into Verdi-greaſe, and indeed far more pure than that which is ſet forth to Sale in the Shops, and which is made in *Spain*, by the husks or preſſed out of cluſters of Grapes.

N. B. In extracting Copper out of Mines, regard is to be had unto this thing, to wit, that with poor and wild or courſe veins of Copper, *Lapis Calaminaris*, or *Zink* is ſometimes found to be admixed; which is no ways perceived to be in them. But if thoſe Minerals are extracted with *Aq. Regis*, and this be to be taken away by Diſtillation, none of the *Aq. Regis* goes forth, but onely a flegm without ſavour, becauſe the *Lapis Calaminaris* or *Zink* doth retain all the Acrimony with it, juſt as if thoſe two Minerals ſhould ſay to the *Aq. Regis*, we do not as yet let thee go, becauſe as yet, we have need of thy indeavour for our amendment, *&c.*

But it is certain that whatſoever Minerals and Metals do retain with them ſharp ſpirits, are as yet immature, and may be ripened by thoſe ſpirits, that they may beſtow Gold and Silver, as hath been already ſaid, and ſhall as yet more largely be ſpoken to.

LVII. *Out of wild or courſe Minerals, or veins of Lead, admitting of no melting, out of which no good Lead, much leſs Gold or Silver, can be drawn, how to extract not onely Lead, but alſo Gold and Silver with profit.*

AS we have ſaid above, that ſome Minerals or Veins of Copper do appear in Mines, the which by reaſon of *Lapis Calaminaris* or *Zink* do refuſe all melting, and can be by no fire reduced: So alſo we here admoniſh, that Minerals of Lead are found, the which do indeed contain much Lead, but by reaſon of the *Lapis Calaminaris*, *Zink*, and a ſulphureous Sand being admixed with them, they cannot be overcome by any melting, for theſe matters do take away a ready flowing from the Lead, and do cauſe that ſuch Minerals, which for the moſt part together with Lead, do alſo hide not a little of Gold and Silver, are caſt away as altogether unfit, and unprofitable, whenas notwithſtanding very much profit might be received from them after this manner.

Let the Mineral by pounding be broken in ſmall pieces, and in my little ſecret Furnace which I have fitted for the calcining of Minerals, let it be roaſted with bright burning Coals, that the groſs Sulphur may conceive a flame, and burn. If in time of operation the matter ſhould gather it ſelf into heaps or knobs, and in co-heaping ſhould make round Pellets, it being taken out of the Furnace, let it again be beaten, be ſet upon live Coals and roaſted, and theſe labours be ſo often repeated, untill all the Sulphur ſhall be conſumed, and the Mineral doth no longer co-heap it ſelf into knobs, but being made bright burning hot like dead aſhes; it no longer ſends forth a ſulphureous ſtink. At length out of theſe aſhes being well waſhed, a dead and unprofitable matter ſeparates its ſelf from the good and metallick earth, the which being melted by it ſelf in a Furnace called by the *Germans Stichofen*, becomes a flowable Lead which containeth Gold and Silver.

But if the Mineral be ſo ſtubborn that it altogether refuſing all melting, could not by it ſelf be reduced,

duced, and nevertheleſs contain Gold and Silver, ſomething of Litharge is to be added to that metallick earth, which procures a flux unto it, and yields that Gold and Silver bearing Lead, which by the common operation wholly refuſeth to offer it ſelf.

LVIII. *Another way teaching by the help of Salt and Fire to draw Silver and Gold with great profit, out of all ſtubborn or rude and untamed metallick earths, in whoſe Veins Lead, Copper, Gravel, or courſe Sands, Iron, or* Lapis Calaminaris *have for the moſt part conjoyned in Society, and which do deny all profit by vulgar operations.*

AS Fire burns up every groſs and combuſtible Sulphur in Mines or Minerals, that theſe do at length ſubject themſelves unto melting, and do render Metals eaſie to be hammered: ſo alſo Salt fixeth, and makes conſtant whatſoever volatile body endeavours to flie away into the air, that it may afford a ripened, melted, and profitable Metal. For that cauſe ſuch Minerals common Salt being added as was aboveſaid, are to be roaſted in live Coals, that that devouring groſs Sulphur may vaniſh by burning with a flame, and that together alſo the Metal it ſelf may be promoted to maturity, and ſo that by this very thing, good Gold and Silver may be ſeparated, whenas notwithſtanding otherwiſe, not any one ſhould obtain ſo much as the leaſt thereof out of theſe very Minerals.

Such an amendment and changing the more imperfect Metals into the more perfect ones, may be attained by the help of Salt and Fire.

If therefore common Salt and groſs Fire are able to perform this in Minerals, what ſhall not theſe, not common but ſecret Fires of Salts effect, in tranſchanging Metals already pure, into more pure and ſubtile ones?

LIX. *After what manner Metals are to be amended by pure Fire, or the fiery ſpirits of Salts.*

IT may eaſily be perceived if a groſs Salt and Fire do ſome good to more groſs Metals, that alſo a more pure Fire and Salt may do more good on purer Metals. Inſtruments whoſe edges are made very ſharp by whetting, are far more fit for operation than thoſe that are dull, and will perform more. By how much the ſharper an Auger or Wimble is, by ſo much the ſooner it boareth thorough the Wood, and on the contrary, by how much the more blunt it is, by ſo much the ſlower it pierceth thorough.

He that is earneſtly deſirous to obtain any good in the amendment of Metals, he muſt of neceſſity apply the ſubtile and ſtrong ſpirits of Salts, that he may deſtroy Metals with the ſame, may kill them, and reduce them unto their former life, and ſo may procure more noble bodies unto them. When their former body is reſtored to thoſe moiſt and cold Fires of Salts, to wit, that they may return unto the form of Salt, but of a more noble and ſubtile one, Metals may far more ſpeedily be deſtroyed; a double Fire performs more than a ſingle one, ſince therefore Salt is by it ſelf no other thing but a meer and con-centred Fire, and the Fire of Wood or Coals joyning it ſelf with the other a greater efficacy muſt needs be expected from them than by common Fire alone, but we have hitherto made mention of ſuch operations, and therefore its needleſs here to repeat them. From what hath been hitherto ſaid, every Chymiſt may gather and learn thoſe things which concern the amendment of Metals, wanting the help of Salt and Fire; more God willing ſhall follow.

LX. *Let us now aſcend higher, and demonſtrate what incredible miracles or wonders our ſecret Fires of Salts may effect nigh to that great work of Philoſophers.*

AS in the foregoing Chapters it hath been ſufficiently confirmed, that unripe Metals may by the help of Fire and Salt, be particularly promoted to a more perfect maturity: So alſo in the multiplying of Animals and Vegetables, that thing evidently appeareth; to wit, if ſufficient meat and drink be adminiſtred to any Infant, that he groweth dayly in bigneſs, and ſtrength of body, untill he come to the age and perfection of a Man. The ſame multiplying in Vegetables offers it ſelf to our view, in that a ſmall ſeed or root do ſnatch to them their nouriſhment from an earthly Salt; and the beams of the Sun, and do riſe up into a perefect, great, and fruitfull Tree. This particular tranſmutation is converſant before our eyes, and therefore is a thing moſt known, but after what ſort the moſt noble part or pureſt eſſence is to be extracted out of the bodies of Vegetables, Minerals, and Animals, that other more weak bodies may be ſtrengthned and amended by the ſame Philoſophers have always hidden and covered with the greateſt endeavour. Hence it is, that there hath been very few, and as yet are, who have had the knowledge of this higheſt Science.

As to what therefore belongs to the great work of the Philoſophers, all the Philoſophers do in their writings with one accord affirm, the which I do alſo in all my writings affirm to be moſt true, and do as it were ſhew with my Fingers, to wit, that nothing in the nature of things doth effect a Tincture and Tinge with a moſt gratefull colour, but Sulphur alone, and that one onely, and that this ſame combuſtible immature and volatile Sulphur is fixed and changed by the operation and help of Salts into a true Tincture, the which is as certain as that which is moſt certain, and yet laborious alſo, and requiring a ſpace of time long enough, eſpecially if any one doth inſiſt in a moiſt way. The way of coming unto the end of ſuch a work as I think, yet with the ſafety of others judgment, this is the beſt, if any one bind or fix ſuch a Sulphur, which was already brought unto a perfect maturity by nature, they might bring this profit with it, that it ſhould not require a longer time for its maturity.

But ſuch a fixed and tinged Sulphur, is no where more nearly found than in Metals, and eſpecially in Copper and Iron, but the better and more pure in Gold; the finding out whereof notwithſtanding (by reaſon of its moſt firm and intimate conjunction with its body, as alſo its ſeparation) hath been always eſteemed almoſt impoſſible. For unto diligent ſearchers, a true ſeparator which might ſeparate the pure part from the impure, hath for the moſt part every where been wanting.

For as it is known ſuch a hard or compacted metallick body, can very difficultly be ſeparated and divided into its parts.

The ſolution of ſharp waters, ſups up indeed every Metal, but it effects no ſeparation. For becauſe Metals

Metals are Homo-geneal things, and the metallick Sulphur is ſo ſtrictly bound to its metallick mercury, by the bond of the metallick Salt, it can never be brought to paſs, that by ſuch ſolutions, or by precipitatings, or by other ways, one part ſhould be ſeparated from the other.

If a Metal being diſſolved by a water be precipitated all its parts being ſo mixed as they were before its diſſolution do fall down and ſettle, and admit of no ſeparation. But if any one would alſo render Metals ſpiritual, that ſo the more pure parts might be disjoyned from the more impure ones by diſtillation, yet there is no ſeparation made, but the more pure body it ſelf aſcends, and again as before, it conſiſteth of three principles, performing indeed more in Alchymy and in Medicine than the more groſs bodies of Metals, but is unfit for a true Tincture, becauſe nothing operates in all bodies, but a lively Soul, and that which vivifies or quickens other dead bodies, for it is the ſpirit, as Chriſt ſaith, which quickneth, the body is unprofitable. Let man, or any other living creature be for an example, the which as long as it lives, it moves it ſelf and operates as long as the ſpirit, the Authour of Life is preſent with it; but that vaniſhing away the body wants all motion, and remains a dead Carcaſs. If now it could be brought to paſs, that we could lay hold of ſuch Animal Spirits, and could render them corporal ones, we might alſo perform incredible things by the ſame, and perhaps faſhion or form a living creature of a lump of earth, the which notwithſtanding God hath reſerved to his own ſelf. But this that bountifull Father hath granted unto us, that out of unmoveable ſubjects, or thoſe wanting a moveable and animal life, we may extract their pure Souls or Eſſences, and render them corporal, and effect thereby things of great moment in Medicine and Alchymy.

But the ſouls of Metals do excell herein, as being more fixed and conſtant than the eſſences of vegetables, but they are far more difficultly attained. For the ſouls of vegetables do ſuffer themſelves to be eaſily extracted, but the colours and ſouls of Metals do hardly admit of extraction, and for that cauſe are accounted of by the ignorant for a thing impoſſible to be done, nor indeed is it altogether without ſome cauſe; for the ſeparation of the tinging ſoul from the hard metallick body is a thing of great moment: many are the ways that have been attempted for the procuring of this Sulphur; and ſome ignorant fellows have written Books, of the acquiring or getting of the ſame, whereas 'tis evident that they never ſaw ſuch a Sulphur.

The moſt learned and moſt witty *Helmont* wrote egregiouſly concerning this Sulphur; but yet not ſo clearly as that any one could out of thoſe his writings get a perfect knowledge of the ſame. Nor indeed is it expedient that ſuch kind of Pearls ſhould be caſt under the feet of ſwiniſh Men. There is no Writer (as far as I know) that hath mentioned any thing concerning this matter, clearer than *Iſaac Holland* in his *Ch. De Amauſis*, where he teacheth, that he who hath gotten the art of changing Metals into tranſparent Glaſſes with their peculiar colours, hath purchaſed a notable ſecret in Metallick affairs. He alludes (by way of likeneſs) to the bodies of Men brought to a clarity or brightneſs after this life, and thus declares his Doctrine and ſays; The ſouls of Metals do ſhine forth through their *Amauſa*'s, or clarified bodies, clad in their proper colours, even as the Souls of Men ſhall hereafter ſhine in the other World, from [or through] their clarified bodies. And further he ſaith, that when ſuch *Amauſa*'s [or Glaſſes] are reduced into their former bodies; then the *Amauſa*'s of Copper and Iron become fixt, that of Silver becomes Gold, and that of Gold becomes Tincture. The ſaid Authour hath not clearly expreſſed the manner of accompliſhing this, but in my opinion (without preſcribing ought to any one) this is the neareſt way of attaining to ſuch an operation, *viz.* of getting the ſouls, or the pure Sulphurs of Metals, *viz.* If the Metals be firſt reduced into *Amauſa*'s or tranſparent Glaſſes, out of which their ſouls are eaſier extractable than out of their groſs bodies. But now, for ſuch an extraction here is ſuch a *menſtruum* required as doth not work upon all the whole body, or diſſolve it, but doth onely attract there out of the colour and pureſt Sulphur, and leaves the body behind white. But where ſhall we find the deſcription of ſuch a *menſtruum?* none ſpeak of it openly, but many mention it obſcurely; nor indeed is it ſo neceſſary that ſuch an *Arcanum* of ſo great moment be manifeſted to every one.

But however, this in brief you are to be admoniſhed of, that like draws its like and extracts it. If a mercuriality be to be extracted out of the metallick maſſes [or bodies,] then 'tis expedient to uſe a mercurial *menſtruum*, for like rejoyceth in its like. So ſulphureous eſſences are extractable by ſulphureous *menſtruums*, and not by mercurial ones. For Water doth willingly aſſociate it ſelf with Water, and Oyl with Oyls. And foraſmuch as all the Philoſophers write that the Sulphur or tinging Soul in Iron and Copper, doth as to goodneſs and nobleneſs equalize the Sulphur in Gold, it will be needleſs (in my opinion) to take Gold, but to bring Iron and Copper to that paſs, that they may become tranſparent Glaſſes, from which their colours may be extracted. But if ſo be that any one is minded to prefer Gold before theſe, and to extract the tincture hence from, he may do as he pleaſes, and will find in many places of my writngs a manuduction, [directing him] to the tranſmutation of Gold, (and ſo of the other Metals too) into tranſparent bodies, which thing is highly neceſſary. For there is not and eaſier way of extracting the tincture out of Metals, than by firſt reducing them into tranſparent *Amauſa*'s. Now the *menſtruum* ſerving for this extracting of the Sulphurs out of the metallick bodies is to be ſo prepared, that it diſſolve not the body, but extract onely the Sulphur or pure Soul there out of. Such *menſtruums Paracelſus* himſelf makes mention of, and affirms, that with them the skie-coloured Saphyrs, the red Rubies, and the yellow Jacynth may be ſo deprived of their colours, as that there remains no more of them ſave onely the white bodies. Beſides, that white Cryſtals may (by the help of tinging ſulphureous ſpirits) be died with various colours. Verily 'tis a ſecret of moſt mighty concernment, to have the skill how to prepare ſuch a *menſtruum* as will penetrate the moſt hard Stones and moſt compact Glaſſes to extract them, and withall to communicate to otherſome various colours, without the corrupting, breaking and deſtruction of any of the bodies, the which thing ſeems in my opinion very likely to be true, though as yet I know not how to do it. That which I have tryed by my operations I can write and teach, *viz.* how all the Metals may very eaſily (yet one more

eaſily

easily than another) be changed into fair transparent and most delicately coloured glasses, and how out of these glasses the pure and tinging metallick souls may be extracted, *viz.* by such *menstruums* as are sulphureous, subtile, not dissolving, but onely extracting

But for as much as these kinds of *menstruums* are not (as far as I know) described by any one, and yet are the producers of such notable effects; I could not omit the discovering of something concerning them, for the sake of such as are Students in true Philosopy, and after some sort shew that kind of extraction, which is to be accomplished by the help of our con centrated spirits of salt, or of our moist Philosophical fires.

LXI. *How a vegetable subtile sulphur is to be so actuated by the nitrous moist fire, that it may extract the fixt sulphur of metals, or their pure tinging soul.*

FIrst of all, the oyls of the vegetables are to be exalted by distillations, and often repeated rectifications to the highest degree of purity and subtilty, and afterwards to be once rectified by some con-centrated nitrous fire, that so being already of themselves subtile, they may get a fiery vigour endued with a faculty of seizing upon metallick sulphurs, and of extracting them out of the hard and compact bodies. For any vegetable oyl how subtilly soever it be prepared, hath not any power of entring into the metals, and much less of having any ingress into their glasses, nor can it extract in the least, though such bodies should be covered with it for a long season. But now if an artificial operation shall have sharpned such an oyl with those most subtile spirits of salts, and have rendred it more acute and penetrative than those con-centrated spirits of the salt do lead in the sulphur, and bestow on it a power of attracting to it self its like.

And albeit that such con centrated spirits do when *per se*, and alone, wholly dissolve metallick glasses and make no separation at all, no, nor do not extract the least particle of any sulphureous substance, yet the case with them is vastly altered, when such fiery spirtis are artificially united with most pure sulphureous oyls; insomuch that they bestow on them a faculty of working upon metals, and of extracting from them a most pure sulphur; nay farther, they purchase these oyls a capacity not onely of extracting the colours out of metals, but also out of other things. Now we have taught at large in our second part of Furnaces, the manner of rendring the oyls of vegetables subtile; and as for the nitrous fire requisite to this operation, the way of con centrating it is to be found in this Book a little before, so that 'tis wholly needless to repeat the same things over again which have been afore treated of. And thus far is my knowledge come, *viz.* how (by the help of oyls animated and actuated by the aforesaid means) to extract the most pure soul out of metallick *Amalsa*'s, or those hard and glassy subjects: But how such a sulphur is to be brought into a tinging medicine, I (professing not my self so great a master) do not as yet know. Neither is it at present needfull to exceed the due bounds by so large a treating of such worthy things; for things wonderfull may be effected by this *menstruum* both in Medicine and Alchymy, and in other arts, concerning which we shall (God willing) presently add somewhat more.

And whereas I have made mention here of clarified bodies, and con-centrated spirits; I judge it worth while also to shew what difference there is betwixt those con-centrated spirits and clarified bodies as the Chymists call them.

The clarified bodies therefore are nothing else save bodies purged and mundified by the operation of the fire. For the fire is the ultimate examiner of all things, as being endued with such a power by which it burns up all things, reduceth them into ashes and powder, and out of the ashes makes glass; that being the utmost or ultimate thing whereunto all things are reduced. If therefore there be in any thing any good, which being burnt in the fire is by fusion or melting, turned into transparent glass, it doth manifest it self in its utmost or ultimate essence, and shine forth in its brightness, insomuch that every one may see what lay hidden in its life afore thus burning it. For example, I take wood, an herb, or an animal, I burn it and transmute it into ashes; these ashes I melt and turn into glass. Having thus done, there appears no colour visible, for the glass is white, and that because the sulphur is consumed in the burning; and the mercury is fled away into the air in smoke, as being two principles which are no ways able to resist the force of fire: But the salt, as being a contemner of the fire remained in the earth of no efficacy.

But now a metal being by the fire turned into ashes, though part of the sulphur and mercury hath in the combustion and vitrification flown away into the air, yet notwithstanding the best part remains; and this is the reason why such metallick glasses are coloured according to the metals nature and property, and which (afore thus burning it) was hidden. We will yet farther evidence it by an example.

If I burnt copper or iron, and reduce it into ashes, and do by melting it turn it into glass, then the copper if *per se* and no other thing added unto it, yields a green glass, and the iron yields a yellow coloured glass. But if there be made an addition, then are produced glasses of other colours, as for example.

If I add to burn iron or *crocus martis* the glass of lead, then the glass made by melting will have the yellow colour of a Hyacinth. The same *crocus martis* being molten with common glass, made of wood-ashes and salt; yields a greenish coloured glass which is the natural and proper colour of the iron. For the lead altered the colour of the former mentioned glass of the iron and made it yellow in the melting, and so hindred it from manifesting its true and natural colour. The glasses of two several colours being molten together do exhibit false colours, as may be seen by co-melting a skie-colour and a yellow glass, the which being molten together yield a green colour, and doth so represent it self both in the fire and out of it too. From hence took I occasion to write and teach the way of finding out (by molten glasses) what kind of metal is hidden in any mineral or metallick earth. Which way of proving mines or minerals is far better and speedier than that which is usually done by a decoction and exhalation of lead in the Cupel. Thus may you mix five, six, eight or ten grains of some finely powdered mineral, with one or two lots of Venice-glass being of easie fusion, and put the matter thus mixed in a well covered crucible, and by melting it reduce it into glass. The colour which will be in the said glass, will shew what metal the *minera* contained: Lead will yield a duskish colour, tin, a white, copper, a Sea-green; iron a somewhat greenish, silver a yellow, and gold

a skie coloured: each of which colours is the true and internal colour of the reſpective metal. Gold doth alſo reſemble a Ruby as to colour if other colours be added thereunto. But yet in the mean time, the skie-colour is its proper and natural colour, and ſo is yellow of ſilver: and this is notably agreeable with the truth, though to ſuch as are ignorant, it ſeems a thing wonderfull, for indeed ſuch mens knowledge ends in external things, but they are wholly ignorant of internal ones. But now the colours of gold and ſilver are better and more perfectly known, if there be added unto them ſome fix and white ſulphur, which prevents the gold and ſilver from being thoroughly reduced into their peculiar bodies by fuſion. If the *Calx* of gold or ſilver be molten with Borax, they both return into their former bodies, and do not paſs into glaſs any ways coloured: But that ſome glaſs of eaſie fuſion be mixed with thoſe *Calx*'s, together with a little powder of flints and ſo molten, then the flints will (by reaſon of their ſulphur) hold with themſelves the gold and ſilver and ſo keep them that they admit not of fuſion [or reduction] in their whole body, but do remain in the glaſs with ſome part of the metalline property which renders their internal colours viſible, which elſe would not appear to ſight.

N. B. If you have the minera's of gold and ſilver at hand and melt them with glaſs, their colours will alſo appear, becauſe that in the minera's there always is ſome ſulphur that hinders the metal from wholly returning into a body, ſo that ſome part of it abides in the glaſs and therein ſhews its colour. This alſo is to be minded, that if haply ſome minera or metallick earth contains not one metal barely, but 2 or 3 more metals, then always that metal of which the moſt quantity is in the ſaid minera doth after fuſing ſhine in the glaſs beyond the reſt. As for example.

Suppoſe I would make tryal in the red Granates [ſtones] I powder ſome eight or ten gr. and mix them with one lot of white Venice glaſs finely powdered, and I melt them, and ſo turn them into glaſs. Now in this tranſmutation the glaſs doth not become red, but of a delicate graſs colour, and ſo teacheth me what metals are hidden in thoſe Granates, *viz.* copper and iron, and alſo more of this, [*viz.* the iron] than of the other. And though there ſhould be ſome gold too, yet is it unperceiveable becauſe of the predominancy of the iron over the copper and over the gold: For (in this operation) that metal onely manifeſts it ſelf to ſight, which is in greater plenty therein than the reſt be.

Iſaac Holland would by this vitrification ſignifie unto us, that after this life, *viz.* when the world is conſumed with fire, there ſhall ariſe from the bodies of men reduced into aſhes other clarified bodies, and of ſuch and ſuch colours, according as their ſouls have (either good or bad) framed, or as it were made unto themſelves in this life-time in their groſs bodies. What other thing [I pray] are fair colours, but the virtues of thoſe ſubjects out of which they emit or ſend forth their ſplendour.

Take a ſimilitude hereof from the melting of minerals, wherein though a mineral of ſilver or copper hath in it much ſilver or gold, yet if the ſuperfluous ſulphur be not (before the melting the ſaid mineral) ſeparated by a little as 'twere roaſting fire; but be (together with that groſs ſulphur,) ſet in a vehement melting fire, there will not verily be any metal gotten hencefrom, but that ſtinking ſulphur would tranſmute the good metal into black Scoria's. So likewiſe, no fair and tranſparent glaſs can be (by melting) made out of pure metals, if that kind of groſs ſulphur ſhould adhere unto them.

Theſe few things touching clarified bodies, I could not paſs over in ſilence, and much leſs could I omit this, *viz.* that the bodies of all things may be much better tranſmuted into clarified bodies by our ſecret fire, than by the common fire. For the common fire drives away the volatile parts, whereas on the contrary, our fire doth preſerve them and renders them fixt and tranſparent as well as the other parts. And therefore of neceſſity theſe bodies muſt needs ſhine with fairer and brighter colours than thoſe others, in which the common fire hath expelled the mercury and ſulphur, and left remaining nothing elſe but the ſalt.

But now as concerning ſuch a tranſmutation into aſhes by our moiſt and ſecret fires, any one may eaſily gueſs the way. For whatſoever is put in them muſt be neceſſarily burned into aſhes, and they far better aſhes too than are made by burning in the common fire. For if the common fire burns any herb or wood into aſhes, the ſulphur burns away in a flame, the mercury betakes it ſelf to its wings and away flies it, and the ſalt abides behind in a few aſhes or a little earth. Now our Philoſophical calcination takes away nothing but conſerves all [the principles ſo called] together; and doth in the firſt place produce to view a black coal, then afterwards other various curious colours, and then a white colour, and at laſt to compleat the operation, it yields a red fuſile and medicinal ſtone.

N. B. Here it is to be noted that for preparing a pure medicine, a pure ſubject is to be made uſe of; for if ſo be that any one would endeavour the tranſmutation of an herb, wood, or any animal into a medicament by the help of the ſecret fires, then all the aſhes and feces which were in the herb would alſo adhere unto the medicament and would render it impure, therefore neceſſity requires that you do not take the whole herb, or the whole animal, but onely their eſſential ſalt, the which being void of feces conſiſts onely of the pure principles of the herb; and doth eaſily admit of being tranſmuted into a red tinging, and more ſoluble ſtone than the herb it ſelf with its feces by it, doth.

I would not have you to account of theſe things here delivered you as if they were of ſmall moment. No, for they are ſuch things as cover over with this their vile or baſe covering, ſuch matters as are of great weight, and which will not come to every bodies knowledge. Surely 'tis a conſiderable thing that a part of any vegetable, animal or mineral body ſhould (by conſerving all the moſt volatile parts, and by rendring them altogether conſtant and ſtable, without the leaſt loſs of weight) be ripened into a fixt ſoluble and tinging red, and medicinal ſtone. This way of tranſmuting all things without loſs of the weight thereof into clarified bodies, is of all others the beſt. And thoſe bodies on this wiſe clarified are without doubt of greater efficacy than are the groſs bodies themſelves of the animals, vegetables, and minerals, which do as yet abound with their groſs and impure feces.

But if ſo be any one be not herewithall content but panteth after higher things, he may adviſe with himſelf about extracting the ſoul out of this red and fixed ſtone, and reduce it again by a reiterated operation unto the form of a ſtone, whereby he will without

without doubt make it yet far more effectual. And by how much the oftner any one ſhall repeat this ſame operation, ſo much the more effectual a medicine will he obtain, for it will at every reiteration notably augment its virtues, for by ſuch actions the efficacy and virtues of things are con centrated and driven into a very little compaſs, wherewithall wonderfull things may be performed.

We are yet moreover to ſee what ſpirits are, but principally what con-centrated ſpirits are, and what they are able to do.

And becauſe the matter in hand gives occaſion of treating thereof in this place, we will briefly give you a declaration of the ſame.

LXII. *What ſpirits are, and by what means they operate good or evil.*

IN the firſt place, there are ſpirits called vegetable ones, *viz.* When vegetables are beaten to pieces, and being contuſed are moiſtened with water, (provided they have not juicyneſs enough of their own, or do altogether want it) and ſo fermented, being fermented they are to be diſtilled, which diſtillation brings forth ſubtile and efficacious ſpirits, and ſuch as are the effecters of many profitable things in Alchymy and in other arts, beſides the uſe thereof in medicine.

Secondly, ſundry and divers ſpirits are alſo made out of animals by diſtillation, as out of Blood, Urine, Hairs, Horns, Hoofs, and ſuch other parts of animals, alſo which ſpirits have their uſe in Medicine and Alchymy.

Thirdly, there are alſo ſpirits which are expelled, or forced out of minerals and metals by the force of fire, but principally out of Salts, as Vitriol, Allum, Salt Peter, common Salt and ſuch like; of the preparations of which kind of ſpirits, the Books of Chymiſts are full, and therefore ſtop us from the ſuperfluous repetitions of the ſame. But as for the concentrating of them and the utility of them, it hath been already deſcribed by us.

I hereby give occaſion for all the diligent ſearchers after true Medicine and Alchymy; to contemplate, what may be effected in Medicine and Alchymy, if thoſe fugitive ſpirits were, by our fixing and moiſt fires which ſeparate not any one part from each other, but do fix all the parts together, deprived of their volatility and made fixt. Theſe few things we were willing to mention concerning the ſpirits which are ſubjected to a Man's power and are within his reach, and ſerviceable for the uſe of mortal Men.

LXIII. *The particular medicinal uſe of the con-centrated ſpirits of ſalts.*

WE have heard that the con centrated ſpirits or moiſt fires of ſalts do reduce all things into a *Calx*, after a Philoſophical manner, without a forcing away of the mercurial part, and a burning up of the ſulphureous: inſomuch that (by conſerving, altering and bettering) they fix the whole. Being therefore compelled by a love to my neighbour, I have a mind to ſet down in this place ſome medicaments, as well univerſal as particular; but yet ſo as that they may not fall into the clutches of [my] unworthy enemies, but may be reſerved onely for friends.

And firſt, here ſhall be a medicine mentioned, that amendeth the weak digeſtion of the Stomach.

Take out the teeth of a Wolf or a Dog when he is half dead, (being firſt ſhot with a Gun and pour thereupon two or three parts of the con-centrated ſpirit of ſalt in a Cucurbit, ſet the glaſs upon ſand that it may be heated moderately, whereby the oyl of ſalt may diſſolve them and bring them into a thick pulſe or maſh. Upon this maſh pour warmed water that ſo all the Acrimony of the ſpirit of ſalt may be ſeparated therefrom, and that there remain onely the white pulſe, wherewith (becauſe ſome of the oyl of the ſalt doth yet remain, and is not waſhable off wholly with water) a little Sugar-candy is to be mixed, that ſo that remaining Acrimony may be allayed, and the pulſe be the pleaſanter for your uſes.

LXIV. *An Antidote againſt Poyſon.*

THE teeth of a mad Dog being prepared after the aforeſaid manner, do yield an Antidote againſt Poyſon. And indeed ſo do the teeth of all Animals, but eſpecially the teeth of Stags and their Horns, do (after ſuch a preparation) reſiſt all Poyſons.

LXV. *What Beaſts they are whoſe Teeth and Horns doe (as to medicine) exceed the reſt.*

THE teeth of all ravenous animals, as likewiſe of Sea-monſters, and their Horns, are of great uſe in medicine; as of *Wolves*, *Bears*, *Lynxes*, *Tygers*, *Lyons*, *Leopards*; and as to the watery animals, *Crocodiles*, and ſuch like ravening fiſhes, whoſe horn, teeth, and ſcales, and likewiſe the claws of Birds of Prey, may be by the con centrated ſpirit of ſalt, converted (after the aforeſaid manner) into good medicaments.

LXVI. *An experimental diſcovery of what Vermine are fit for the uſe of medicine.*

TAKE ſtrong and well rectified ſpirit of ſalt, or onely a ſtrong *Aq. Fortis*, put thereinto your Vermine, of what kind ſoever it be, and it will preſently endeavour to get out aſſoon as ever it feels the ſaid moiſt fire. But being it cannot get out, it will ſtruggle till it dies. Now by how much the longer the worm or flie liveth in the *Aq. Fortis*, by ſo much are its virtues in medicine greater, and this may ſerve as advice to every one. As for the way of preparing medicaments out of Bark of Trees and Husks ſhall be mentioned by and by.

LXVII. *An experimental diſcovery, of what Herbs are profitable for Medicine, or unprofitable.*

YOU are to make uſe of the way but now mentioned concerning Vermine, and ſuch Herbs as thou knoweſt not, or ſuch whoſe virtues are to thee unknown, put (one after another) into the moiſt fire; and that Herb which is of a ſlower ſolution, excells that which is ſooner diſſolved, both in ſtrength and virtues. For example, Lettice, Purſlane, Mellons, Cucumbers, and ſuch like wateriſh Herbs, (and ſo is it with fruits too,) have a moiſt nature, and are preſently turned into water by thoſe fires. But Roſemary, Sage, Thyme, Dodder, and other hotter Herbs, require a longer time for their ſolution. Ginger, Pepper, Cloves, Nutmegs, Cinamond, Cardamoms, Zedoary, *&c.* do require a yet longer time

time as to their solution, afore they will thoroughly pass into a water. From hence may any one know the nature and properties of Herbs very easily. This also is to be observed, that the Medicine out of a Vermine, or out of any Herb, is by so much the more efficacious, by how much the vehementer venenosity it abounds withall.

LXVIII. *The manner of preparing an effectual medicament out of venemous Vermine and Insects.*

I have taught in the second part of my spagyrical *Pharmacopæa*, a way of correcting venemous insects by the fixt Liquor of Niter, and of transmuting their venome into an effectual Medicine, which [way of preparation] he who is studious of good medicaments will there find. But now in this place is taught, by what means such like Vermine, and such Herbs as abound with Venome are to be corrected by the con-centrated fire of salt, and to be turned into excellent and penetrative medicaments. The operation whereof is thus.

Pour into some glass vessel, one, two or three ounces of our con-centrated fire of salt, then put thereunto such Vermine as you would prepare your Medicine of, one after another, provided that you do not put more in, than the said fire is able to dissolve and consume. When all are dissolved and converted into water, all the poysonousness is lost [or gone] and they become good medicaments.

LXIX. *The manner of separating the medicament made of Vermine dissolved by the moist fires.*

THere is found to be a great difference amongst Vermine and venemous insects. For some of them are of a dry nature and property, some of a moist, some of a fat and oily nature, insomuch that it is altogether needfull to make a due distinction of their natures. Such insects as be of a dry nature as Cantharides and such like, are to be used in the form of a salt. The aqueous Vermine, as Earth-worms, Spiders, and such like; they exhibit their medicinality in the form of a Liquor: The Balsamick Vermine, as the May-worms, and others of that kind, do (beside the medicament they afford) yield also a fat and Balsamick Oyl; and indeed (both for external and internal medicinal use,) much more effectual than the Liquor it self.

But that the thing may be the better understood, I will here set down an operation, which every one may follow as a leading Star.

LXX. *How the operation in dealing with all kinds of Vermine is to be used.*

TAKE some ounces of May-worms, put them in a glass, pour upon them so much of the concentrated spirit of salt, that the Worms may be well covered therewith and be by little and little dissolved; after that they are wholly dissolved, put the solution into a separating glass, shut the mouth of the glass with your finger, then turn the glass upside down, keeping it so long shut with your finger, till all the fat oil swim at top of the Liquour. Then take away your finger that the Liquour may run out, and when the oil comes, shut the mouth of the glass again with your finger, and let it run out into another glass. Keep this Oil or Balsam as a precious treasure, with the which thou wilt perform wonderfull effects in the curing of diseases, but principally in the Gout and Stone. But yet thou wilt get but little oil from these Worms, and when you put them into your dissolving Liquor, you must have a care that you do not touch them with your hands, but take or catch them with a small Forceps, and so put them into your glass. For they have in them this property; if you touch them with your hands, they presently colour them with their fat Balsom that they cast out, which somewhat resembles the smell of Musk. As if they should say, *Pray let us live, for we give thee all we have: Take this Balsom and make use thereof for the curing of incurable diseases.*

Some men studiously carefull in such affairs have gathered this Balsom, and have found it to be far more efficacious than the Worms themselves, yea indeed too strong, because they were ignorant of the way of correcting it.

LXXI. *The separation of the medicinal Liquor from the moist fire, after the separation of the Oil.*

AS concerning the Liquor from which the Balsom is separated, *viz.* the medicinal parts is very hardly separated without a mortifying of the moist fire; therefore the moist fire of the Salt is to be killed with a contrary fire, that so the separation that is required may be made; and 'tis thus to be effected.

Filter the Liquor consisting partly of the dissolved Worms, and partly of the fire of salt, that so it may be rendred clear, and free from the Coals or Husks of the Worms, if haply there be any of them remaining undissolved. And if (by reason of the too much fatness) it be very difficult to filter, pour thereunto so much common water as to make it thinner, and more ready to pass through the Cap Paper. Into this thus cleared Liquor, drop the Liquor of Salt of Tartar, and it will kill the sharp fire of the salt; so that there will arise from the fire of the salt and from this Alkaly-salt a salt of a middle nature, and concreting into Crystals, and will leave the other part in a liquid form; the which said part will be either white or yellow according as the saline fire which you made use of, is. Now this Liquor is more virtuous than the concreted salt is, as being that which contains the essence of the Worms, which doth not congeal or shoot with the salt, but abides in the form of a Liquor. Experience will teach the business more largely.

Now such qualities as these Worms had afore their preparation and as yet not deprived of their Venome; the same do they obtain after their preparation, but with this provizo, these qualities are safely used, which afore were hazardous. But now the properties of these Worms are these, they do not onely draw out of the body all podagrical humours, but also expell the Stone out of the Reins and Bladder beyond all other medicaments; and besides, do cure other such like diseases as are meerly unknown, and are adjudged plainly incurable. More, it wholly takes away that volatile Gout, which runs wandring through the Members of the Body. But here ariseth this Quæry.

LXXII. *Whether or no every moist fire of salt is also fit for this labour?*

FOR answer I say, that indeed this very labour may be accomplished by any moist fire; whether

ther it be prepared out of vitriol or common ſalt, or ſalt peter. But withall I affirm, that there proceeds a great difference from thoſe ſalts. For the con-centrated ſpirit of niter, doth (after its being mortified with a fix ſalt) ſhoot into ſalt peter. The con-centred ſpirit of ſalt, ſhoots into ſquare Cryſtals. The ſame doth oil of vitriol and ſalt of tartar. But the ſalt that is in this operation made of the common ſalt exceeds the others, as to ſweetneſs. That which comes from vitriol, doth beget a nauſeating by reaſon of its bitterneſs; and that which ariſeth of ſalt peter is of a middle nature. But yet they do all three of them enjoy a laxative and purging faculty; and likewiſe provoke Urine either ſtronger or weaker according as the Vermine are, which theſe ſaid fires have been uſed in the diſſolution of.

N. B. That the operation of the Liquor doth always exceed the virtues of the ſalts. When the ſharp ſpirits of ſalt are not mortified with a *Lixivium* of Tartar, but with the ſpirits of Urine or of *Sal. Armoniack*; the ſalt and liquor become far ſtronger, than when the precipitation is done with Salt of Tartar. For the ſpirit of *Sal. Armoniack* doth for the moſt part precipitate the diſſolved and corrected Vermine into a Powder, which being waſhed off with common water, and freed from all Acrimony or ſharpneſs is uſed in medicine, in a dry form. But this, the *Lixivium* will not do, but always conſerves the Vermine in the form of a liquor.

LXXIII. Queſtion. *Whether or no there may be any more or any other uſefull things learned from this ſolution of venemous Vermine?*

FOR Anſwer. Yes, for this operation doth not onely teach the good and bad properties of all Vermine, but doth withall evidently demonſtrate, that every animal of what kind ſoever, (yea and Men themſelves too) when they are put into ſuch an agony and perceive the approach of death, do diſcover and clearly evidence the internal motions of [their] nature, which they have (in their life time) been indued withall.

LXXIV. *The way how to know the internal nature of every Worm in the earth, Fiſh in the water, Birds in the air, yea even of Man himſelf.*

TAKE a *Scarabæus* or Beetle, either ſuch a one as lives in Horſe dung, or elſe one that is of a coppery colour, put him into a glaſs wherein is ſome *Aq. Fortis*, and you ſhall ſee that in the utmoſt neceſſity [or laſt agony] of death, he will not endeavour to get from out of the *Aq. Fortis*, but will ſtrive to hide himſelf in the earth according to his innate property. But whereas the bottom of the glaſs is too hard for him to get thorough, he will be ſo long endeavouring to accompliſh his deſire, and in ſtriving to get through the bottom till he dies. From hence may it be perceived what his ultimate refuge [or ſhift] is: *viz.* to endeavour the ſhunning of his approaching death, by ſheltering himſelf within the earth.

If you put a flie in the *Aq. Fortis*, ſhe will not go to the bottom but will do her utmoſt to get out at top, becauſe her living is in the air, and ſo all volatile or flying things are wont to do. As for a fiſh if it be put to its ſhifts, it endeavours to ſhun the danger by betaking it ſelf to the bottom.

In ſuch a kind of manner doth the nature of men become apparent, when they are reduced to the extreameſt of difficulties. A godly man, whoſe thoughts are in this life time always upon God, will conſtantly adhere unto him in his Agony, and being upon dying will betake himſelf to him for his refuge, in whom he hath at all times built his hope, and waiting or looking for help from thence, from whence he hath always hoped for it.

But the ungodly Man who hath never in his life time feared God, nor ſet him before his eyes, but hath always yielded himſelf with his thoughts unto the will of Satan, he will very hardly implore (in his greateſt anguiſh) the help of any other than of him, to whom he hath (in this life time) adhered in all his thoughts and actions.

LXXV. *The preparation of good medicaments out of venemous vegetables, by the con-centrated ſpirits of ſalts.*

WE have hitherto taught, that our moiſt fires of ſalts do indeed deſtroy all things, but do not burn up, or force away ought of ſuch things as the common fires are wont to do. That this is true, even the vegetables themſelves bear witneſs, which being put into our moiſt fires are therein diſſolved, and paſs into a water. But their oil which is in them is ſeparated, and ſwimmeth at the top, and ſo may be ſeparated thencefrom, as we have mentioned above concerning the May-worms. After the ſame manner the eſſence of the herb may be ſevered from the ſpirits of the ſalts, as we have there declared. The oyls which by this operation are drawn out of the herbs and other vegetables, do obtain great and peculiar virtues, becauſe they are excellently well corrected by the efficacy of the moiſt fires, and are amended, which correction, and bettering they do not at all attain by their being diſtilled and expreſſed.

LXXVI. *The correction of the too vehemently purging ſubjects by the moiſt fires, whereby they may be ſafely made uſe of.*

Diagridium or *Scammony*, *Hellebor*, *Cataputia*, *Gambogia* and other vehemently purging ſubjects may be diſpoiled of their venemous faculty, by the aforementioned way, and be rendred more ſweet and milder.

LXXVII. *The correction of the too vehemently operative Diureticks, whereby they may be of ſafe uſe in the cure of the Stone.*

DIſſolve Cantharides, May-worms, Earth-worms, Millipides or Pig-lice, in our con-centrated fires, and follow thoſe ways of operation which we have afore preſcribed, and you ſhall acquire an excellent and ſafe medicament, having a faculty of healing the Stone of the Bladder and Reins.

LXXVIII. *The amending of narcotick and ſomniferous ſubjects by our moiſt fires, that ſo they may perform or ſhew their virtues without hurt or danger.*

TAKE *Opium*, Henbane ſeed, Mandrake, or the like ſubject that provokes to ſleep, pour on it the con-centrated ſpirit of ſalt, and it will melt [or diſſolve] therein; if there be in it any oilyneſs, as in the Henbane ſeed is uſual, it will ſeparate it ſelf,

and swim on the top of the liquor, the which is to be severed from the liquor, and to be warily kept; becauſe it being onely anointed on the Temples will preſently cauſe ſleep. The liquor is to be uſed internally, as we have preſcribed in the precedent preparations.

LXXIX. *The amending of venemous ſubjects, that are together purgative, ſudorifick, diuretick, and ſomniferous, by our moiſt fires; inſomuch that they do not onely become ſafe, but are the effecters of much good in medicine.*

AMongſt the number of ſuch kind of ſubjects, are Staveſacre, or the ſeed of the louſe-killing herb, Levant Berries, vomiting Nuts, and many others of ſuch a like faculty, which are to be proceeded withall after the ſame manner, and by the ſame operations as the former.

By this or the like way may all venemous, and vehemently operative vegetables and animals be corrected, ſo as to be ſafely admitted to internal uſes, and to be producers of ſuch effects as are of great moment in Phyſick; whereas otherwiſe (though they have in them excellent virtues) they cannot by reaſon of their vehement operations be taken into the body without danger.

LXXX. *Whether or no poiſonous minerals may be corrected as well as the vegetables and animals, by our ſecret and moiſt fire of ſalt, and be turned into wholeſome medicaments.*

YOu are to know, that not onely venemous animals and vegetables but likewiſe all the minerals that abound with poiſon may be amended, and their moſt preſent or ſpeedily operative poiſon be converted into moſt excellent medicines. For example.

LXXXI. *How the venenate and volatile minerals are ſo to be inverted by our moiſt fires, that the volatile be rendred fix, and the poiſon be made a medicine.*

TAKE of white or red Arſnick one part, pour thereto two or three parts of the con centrated fire of niter, the which [niter-ſpirit] you ſhall diſtill thencefrom in a head and body in ſand; then take the remaining matter out of the glaſs, and waſh it with common water; which being done, you ſhall have the Arſnick, Diaphoretick, and ſuch as may with ſafety be taken into the body; but yet in a ſmall doſe, becauſe it doth ſometimes provoke vomit, and principally when the nitrous fire is ſomething of the weakeſt. But to prevent ſuch vomiting, the ſaid fire is to be twice or thrice drawn off from the Arſnick, by an Alembick; that ſo the poiſon may the better be ſlain, and the volatility tranſmuted into a fixity; and the ſame Arſnick may be afterwards molten and handled with the other metals without all danger of poiſon, which was impoſſible to be done afore. For the Arſnick whoſe poiſonouſneſs is not as yet removed from it, cannot be admitted into the body without great danger. Neither do we here inſert the preparation of ſuch medicaments out of Arſnick, and the like venemous minerals, for this cauſe that they ſhould be introduced into medicine; no, for there are other ſafer medicaments to be had, our aim herein is onely this, to ſhew that even the moſt poiſonous, and moſt fugacious or volatile minerals may be inverted or turned in and out by our moiſt fire, and diſpoiled of their veneno-ſity and rendred fixt.

LXXXII. *The manner of tranſmuting the fugacious and eaſily fluxible minerals by the moiſt fires of ſalts, ſo as that being fixed they hardly admit of fuſion or melting.*

TO exemplifie this, let us conſider of Tin or *Zink*, which are reckoned amongſt the metals of moſt eaſie melting, and are moſt volatile. For the vulgar know that Tin is molten with a very little fire, and doth thereby vaniſh in ſume, if it be but kept in continual flux. But if it be calcined by continually ſtirring it into aſhes, it becometh fix, nor doth it admit of reduction to its former body by any violence of fire, but is turned into glaſs.

So after the ſame manner do we roaſt or calcine Tin, *Zink*, and the other flying metals with our moiſt fires, and burn them into aſhes, and they ſuch ones too as do not return to their former body, and thus 'tis done; when we pour on them our fiery liquors, ſo as that they heat together, or do even by abſtraction [or diſtillation,] again free the ſaid metals from thoſe liquors; for then theſe metals remain in the bottom like to dead aſhes, nor do they ſuffer themſelves to be by any means reduced to their former bodies.

N. B. But whoever he be that knows the uſing of ſuch matters and powders thereunto, as can reduce ſuch aſhes to their former and fuſile bodies, ſuch a one will not ſpend his labour in vain; for he will get a metal of a much more noble and better nature than Tin, whoſe greateſt internal part is gold and ſilver.

But yet let no body imagine that he can perform this reduction by the help of Borax or Salts; no, in no-wiſe. For there are metallick matters required to this labour, to cauſe a fluxing or melting, ſundry preparations whereof I have taught to and again in my writings, but not under ſuch a title or name as if this power or efficacy of thus doing were aſcribable unto them. For I have barely mentioned their uſe in other metallick tranſmutations.

LXXXIII. *How flying mercury is to be ſo fixed as to admit of heating red hot.*

COagulate common mercury with common ſulphur into a black aſhes, and then mix this aſhes with the con-centrated fire of vitriol, or rather with ſuch a fire as is extracted from ſulphur it ſelf; ſo as that there may ariſe from this mixture a thin maſs; of which maſs put one or two lots in linnen or cotten rags, and ſo rowl them up that one fold may come over another, and the mercury may be in the middle. Then tie this ball firmly and ſtrongly with a thread, and let it be environed all about with the fire, that ſo all thoſe rags may be red hot and changed into Coals.

Take out all this red hot maſs, let it cool, ſeparate the burnt linnen rags, and you ſhall find the mercury turned into a red powder; but yet it hath no ingreſs into the metals, nor performeth it any thing of much moment in medicine, becauſe it is converted by the burning of our fire into a dead earth. Neither have I here mentioned this coagulation as if any gain were to be received thencefrom; but onely on this account, that the moſt great virtues

tues and powers of our fires may by the operation thereof be demonstrated.

LXXXIV. *Another experiment easily demonstrating the possibility of rendring mercury constant in the fire, by our secret fires of salts, which thing the known and common fire can never do.*

MELT one part of common and yellow sulphur in a crucible or earthen Pot, and being molten like oil cast thereinto two parts of common mercury, and mix the matter well with a *Spatula*, that the sulphur may assume the mercury, and may pass with it into a black mass. To which mass you must yet add so much sulphur as the weight of the whole mass in the Pot is of. Then all is to be molten together, and to be by well stirring so long mixt untill it get an ashy colour. Then you are to dip in the said mass as it is in flux, pieces of linnen, such as they are wont to use about fuming their Barrels with a brimstony odour, to preserve them from stinking. Such rags being put on an Iron Crook may be kindled, by which kindling they are burnt up, the sulphur and part of the mercury vanishing into the air, but some part being calcined with the flame of the sulphur and fixt, sticks to the burnt linnen. But what virtues this calcined mercury abounds withall I cannot tell, as having never experimented it, and I have onely inserted here this operation, for this end, that the power of our moist fires may be made apparent. Many more meditations and inquisitions will be thereby laid open, which otherwise would never have been sought after nor found out. For in this labour there operateth a twofold fire, *viz.* the visible flame, and invisible moist fire which the sulphur hideth, and by the burning up of its body, manifesteth, and renders visible and efficacious.

For that heavy acid oil of sulphur, which sticks hidden in all sulphur, performeth most great matters in metalline things; and because the flame or external fire exasperates and forceth on the internal, sharp and moist fire of the sulphur, that acid quality sets upon that subject that is adjoyned to it, and destroyeth the same, and advanceth unto a more fixed state.

But that I may in some sort satisfie the greedy searcher after truth in this thing, it seems to me expedient here to mention the occasion, which (without studying thereafter, *viz.* this coagulation of mercury) did by chance bring me thereunto; and did chiefly shew me an excellent *Arcanum* of bringing all Wines, Vinegars, and other such like drinks easily and speedily to a clarity and transparency. Such a secret it is, as I believe never was known as yet to any, and therefore worthy to be here set down for the common benefit of mankind.

LXXXV. *An historical discovery of the reduction and restoration of tenacious and corrupt Wine, to its former clarity and goodness.*

I had some Wine in a Vessel that became viscid or ropy and tenacious; for the amending of which, I sent for a Wine cooper, he pours it out (as is the usual custom) into another fresh vessel, and used thereunto all his art, that so he might better it. He passed it oft times through a long Pipe made of white plates, and perforated with many small holes, and many other means he used, even whatever he had knowledge of, but yet all he attempted was in vain. then at last he put into the Wine no small portion of salt, and shook them both together very strongly, but all in vain, insomuch that he left my Wine corrupt [as he found it] and out of all hope of restoring it.

But because there was too much salt thrown into the Wine, yea so much as that it might be perceived even by the tast, the Wine was rendred unfit to be drunk, though it should have [thereby] recovered its former clearness. So there remained nothing else to be done therewithall, save the extracting of its spirit by distillation. Yet nevertheless I had a good mind yet to try whether or no it could possibly be freed from that tenacity: to this end therefore I kindled some sulphurized rags, being sprinkled over with the mineral or oar of lead reduced into powder, and with that fume imbued I my Wine, as is the usual custom when Wines are through corruption degenerated from their good state or condition. I added thereto the oar of lead because that as the sulphur was burning the fume of the lead might penetrate the Wine and precipitate all the defilements to the bottom. But this experiment did not fadge. Then I took mercury and mixt it with sulphur after the aforeshown manner [in the foregoing Chapter] and dipt some rags therein and kindled them, hoping that the mercury being transmuted into fume would have ingress into the Wine. But yet it appeared quite contrary in the use, the sulphur indeed was consumed by burning, but the mercury would emit no fume, but was contrarily turned into a red powder, and stuck on to the burnt rags. After these burnings, (*viz.* of this mercurialized sulphur) often reiterated, the Wine did not smell of the Brimstone, as it's usual to do, but of Musk or Ambergrease, and recovered its former clarity; but yet not fit to be drunk because of the overmuch quantity of the salt thrown thereinto.

Thus it happened unto me, the which thing others may consider of with a more accurate meditation, and may haply (from this history) apprehend such things, as may in other matters be very profitable. For it is not in vain that I mention these things in this place. Enough is said to the wise. 'Tis sufficient that I have showed the way, if any one refuse to go in the same let him blame himself.

LXXXVI. *How our moist fires of Salt are able after a sort to fix the yellow and common sulphur, so that it may be used with profit both in Medicine and Alchymy.*

TAKE one part of yellow sulphur beaten into powder, and four or five times so much in weight of the con-centrated fire of salt peter, which spirit pour upon the said powder in a glass cucurbit, and abstract it thencefrom several times by an Alembick; this done, the sulphur in the cucurbit will get a red colour and become pellucid or transparent.

If it resolves in the air into a fat oil, the operation is well handled; if not the labour is to be repeated either with the self same fire or with more new, which is the better way. For the said fires are to be so often drawn off thencefrom untill it flow [or resolve] into a fat oil: An oil I say of sulphur which is endued with great virtues, not onely in Alchymy and Medicine, but may likewise be used in other arts with a great deal of profit. But especially it is an egregious Balsom, resisting all the sicknesses of the Lungs, and other putrifying corruptions,

tions, as shall be apparently evidenced in the following Centuries, more largely treating about these things.

LXXXVII. *A way of turning Antimony into a snow-white medicament, by our moist fires of salts, and which is of safe and profitable use against the Plague, all Fevers, and other diseases.*

WHEN the *Regulus* of Antimony made *per se* without iron, and beaten into a powder is perfused or throughly moistened with the con-centrated fire of salt peter, and is for a while kept in warm sand; the moist fire burns the *Regulus* of the Antimony into a white powder. After that the whole shall be of a white colour, pour thereto common water, and it will imbibe or draw to it the fire of the niter, which will again be fitting for other labours, and perform the office of spirit of niter.

The white powder being by many washings rendred sweet, and then dried, performs the office of an excellent diaphoretick medicament and may with safety be used; it strongly resists the Plague, all Fevers and other diseases, that are to be expelled by sweat.

LXXXVIII. *By what means black and crude Antimony is to be reduced by the nitrous fire into a white powder, and the combustible and yellow sulphur separated therefrom, that it may serve as a* Panacæa *for the resisting of all diseases, and may operate by the four Emunctories, Vomit, Stool, Sweat, and Urine.*

ANtimony is by so much the better and nobler, by how much the longer and fairer Rays or Stria's it appears to be of, and therefore such is of greater efficacy in medicine than all other sorts. To this therefore being powdered, pour so much of the nitrous fire as may serve to dissolve it; the which fire will presently even in the cold, begin the work of its dissolving. When that is done, put the glass in warm sand that all the Antimony may be dissolved, and its yellow sulphur may swim at top of the solution like a yellow powder. The solution being cold, strain it thorough a pure linnen cloath, and the sulphur will stay behind in the cloath, and hath its peculiar use in Medicine and Alchymy. But to the solution pour common water, thereby to quench and weaken the nitrous fire, so that the Antimony may fall down to the bottom, in the form of a tender and snow-white powder; the which being well washed and dried, may be made use of as a *Panacæa* to drive away many diseases: For it operateth with a singular efficacy by all the Emunctories, but yet very safely, unless any one doth too foolishly and unskilfully abuse the administration; It is also endued with all those virtues that I have ascribed to my red *Panacæa*.

LXXXIX. *By what means the con-centred fire of Kitchin salt drives over Antimony in a retort like Butter, and affordeth a matter of profitable use in Medicine and Alchymy.*

POUR upon the *Regulus* of Antimony beaten into a powder, the heavy con-centrated oil of common salt, the which being again drawn off thencefrom in a retort by distillation, brings over with it as much of the *Regulus* of the Antimony as it can, and ascendeth like a thick Butter. It is a mighty fire, and very fit for the ripening of some immature metals; and withall is most profitable in Surgery, and lays a good Basis and foundation for the curing of incurable and cancerous Ulcers. If you pour water upon this oil, the Antimony precipitateth out of it, in the form of a white powder; and is to be afterwards well washed and dried; so that being reduced into that white powder, it becomes a good medicament to be used in all those diseases, wherein the aforesaid medicaments are appliable; but with this caution, that it be given but in a very small dose, because it is of a more powerfull operation than the aforegoing medicaments prepared by the help of the nitrous fire are of, and that for this reason, because the oil of common salt makes things fugacious or flying, but the nitrous fires renders them more constant in the fire.

XC. *The way of turning mercury into a red, and strongly purging medicament by the operation of the nitrous fire.*

ABstract two or three parts of our nitrous fire, from one part of purged mercury, by distillation in a glass cucurbit; and it will make the mercury far more fixt than if *Aqua Fortis* were many times drawn off therefrom by distillation. This red mercury is to be freed from its saltiness with common water, and so becomes a strong purge, and is to be used in a small dose of one, two, three, or at the most four grains, and effecteth the cure of *Morbus Gallicus*, and other such like loathsome diseases.

After the same manner there may be easily prepared, not onely sundry and excellent medicaments, by the operation of our moist fires, but there may be likewise done things of great moment in Alchymy and other arts; concerning which time will not permit me at this present to make a more ample narration of, but I will remit it to the next following Centuries.

Now forasmuch as I call in this Treatise the con-centrated spirits of salt, moist fires, and yet as to their outward shape they represent no shew of fire at all; I deem it necessary to shew by a more firm demonstration, that they abound not onely with fiery virtues, but also are (after their inside is turned outwards, and their outside inwards) true, visible, palpable, and sensible fires, but especially the nitrous fire, which best of all confirms this our opinion and saying, it being prepared by the Chymick Art and operation out of a fiery subject.

XCI. *The way of converting or turning the internal and yellow colour of our moist and white nitrous fire from the inmost parts, outward, and making it visible.*

THAT there is hidden a yellowness and redness in niter, is not beyond the reach of any ones capacity, but it is very easily likely, and credible. For seeing that salt peter is a solar child, it must necessarily answer to [or resemble] its father the Sun in colour, form, virtue and efficacy, if it would purchase belief with any one as to its original and nativity. But salt peter shines with a white colour, but the Sun is clad with a yellow garment and shines like the fire; insomuch that there is no correspondency or likeness of colours, though otherwise there is found the greatest similitude in burning, and in ripening all things. This onely being the difference

difference between ſalt peter and the Sun, the one, *viz.* the peter doth particularly onely augment, ripen and advance all things; but the Sun doth univerſally beſtow on all things, life, increaſe or growth, and nutriment, but yet the ſalt his companion is an helping aſſiſtant as ſhall be evidently proved in the end of this book.

I do verily believe, that if it were an eaſily accompliſhable thing by us, *viz.* to extravert the internal and innate redneſs in ſalt peter outwards, and to ſeparate the ſame from its unclean and groſs body, and knew we how to render it fix and conſtant, we ſhould perform things of moſt great moment, in an univerſal way.

But yet for the removing of this doubt, I will ſhew that ſalt peter is the ſon of *Sol*, though (as to its outward Phyſiognomy, it reſembles not its Father. I do therefore ſay, that its Father is the yellow Sun, from him it is generated, but yet by the help of the white Moon, ſhe is the Mother, and beſtows on it the white colour. But I ſay, that the paternal bloud and fiery virtues it hides in its inmoſt bowels. So wiſely is Salt Peter ſigned by its Parents, *viz.* by the Sun its Father, and the Moon its Mother. The Father beſtows on this, his Son a fiery heart; the Mother a white and cold body; from hence 'tis that it is clad with an Hermaphroditical nature, being Male and Female together, hot and cold, red and white, vivifying and killing.

XCII. *Of the admirable nature of Magnetiſm, attracting to it ſelf its like.*

ACcording to my ſimple and ſmall judgment, the red colour of ſalt peter is not (by the operation of any other thing) to be ſeparated from its white body, better and more commodiouſly than by the affinity and likeneſs of ſome certain magnet that will touch it.

For example: Let us conſider a little of common gold and common quick-ſilver, they are ſo linked with a tye of mutual love, and internal likeneſs to each other; that the one draws the other unto it ſelf.

For if in dealing with mercury any portion thereof ſhould happen to fall on the ground, and daſhing it ſelf into a thouſand Atoms, it cannot be by any kind of way better gotten together again, than by the help of ſuch a magnet, as will attract to it ſelf the diſperſed and dilated Atoms; ſuch a magnet metals are, and eſpecially gold, as being conjoyned to it in the neareſt affinity; therefore I ſweep together this ſo widely diſperſed mercury, together with the earth and other defilements from which the ſaid mercury is ſcarcely diſtinguiſhable as being all over covered therewithall: and to theſe defilements do I put a piece of copper, ſilver or gold, which being well ſhaken to and agen amongſt theſe filthes, draws to it ſelf the widely diſperſed and ſmall Atoms of the mercury, and ſo recovers it by extracting it out of all that rubbiſh.

Now when the metal hath attracted mercury enough, and can attract no more, the mercury is to be wiped off from the metal with a linnen cloath; which being again well ſhook amongſt the traſh as you did afore, draws to it ſelf the other Atoms; theſe labours are to be ſo often repeated, till it be all extracted, and ſo renders it thee the ſame without any loſs.

Juſt ſo and after the ſelf ſame manner may the inmoſt ſoul, and which is largely diſperſed throughout the whole body of the ſalt peter, be extracted thence-from; were onely ſuch a magnet but known unto us, as had a great affinity with the ſoul of the niter.

I will yet ſet down another, and a more evident ſimilitude, that ſo the buſineſs may become the more clear and manifeſt and be the better underſtood.

XCIII. *A clear and evident demonſtration, whereby is ſhown that even the moſt hidden things may be manifeſted and rendred viſible by their magnets.*

LET the admirable nature and property of the common magnet be well conſidered; nature having endowed it with two plainly contrary virtues, one of attraction, the other of expulſion. For on one of its ſides it draws iron to it ſelf, and on the other of its ſides it drives it off; and thus it does, not onely in its great pieces, but alſo when 'tis broken into very ſmall bits. For always on one ſide it draws to it ſelf the iron, and on the other ſide drives it from it ſelf, by this operation reſpecting both poles, *viz.* the Northern and the Southern.

But to return to my purpoſe: I will demonſtrate by evident examples and operation, that the inmoſt and moſt hidden nature and properties of things, are wont to be moſt evidently manifeſted and obtained, by attracting, and repelling magnets. For all the things that are, have their enemies and their friends, as ſhall be proved in the following operations.

XCIV. *An operation demonſtrating or affirming, that the internal and hidden natures and properties of things may be manifeſted and obtained by attractive or repulſive magnets.*

DIſſolve ſome lots of lead, and ſuch as is wholly void of ſilver, in *Aq. Fortis*, and precipitate the lead by pouring thereunto ſome ſalt water, this [precipitated lead] waſh with fair water and dry it. Take ſome three or four ounces of this *Calx* of lead, and thereto admix a fifth part of pure gold, being firſt reduced into moſt pure and moſt ſubtile Atoms, on ſuch wiſe as hath been taught in other places of my writings; but if you have not at hand ſuch a *Calx*, uſe another *Calx* of gold prepared any kind of way, but yet the firſt *Calx* is the fitteſt for this operation. Melt both the *Calx*'s, *viz.* the leaden and golden one in a crucible, that the lead may become a fuſile ſtone; but the gold *Calx* will (by this operation) be much heavier, and be white, this whiteneſs is nothing elſe ſave pure and good ſilver, drawn out of *Saturn* by *Sol* ſympathetically, and made viſible, which (afore) lay hidden in the lead in a ſpiritual and inviſible manner.

But ſome may here demand; foraſmuch as there is ſo much ſilver hidden in all lead, whence comes it that none are found that get it out from thence? I anſwer, that there are indeed a many that would get out great maſſes of ſilver out of lead, did they but underſtand the art, and could ſo bring it to effect. But ſeeing they are ignorant of the natures of metals and their properties, and know not how to do any thing, they cannot become maſters of their wiſhes. Now in this extraction, there is a two-fold cauſe preſents is ſelf, *viz.* Sympathy, and Antipathy. The gold by reaſon of the kin and amity

it hath with the lead, draws thencefrom unto it ſelf the ſpiritual ſilver; and becauſe of an inbred hatred it has to ſalt, it drives away the ſame from it ſelf. The gold therefore (in extracting the ſpiritual ſilver out of the lead, hath an aſſiſtant, aiding it by a contrary operation, and ſo bringing to paſs, that there is ſo much the more ſilver extracted, becauſe the ſalt being added to the lead, doth by reaſon of that inbred enmity and difference 'twixt it and ſilver drive this, [*viz.* the ſilver] away from it as its enemy.

And although that out of ſuch lead prepared with ſalt may ſilver be always molten, yea without adding any gold thereunto, meerly becauſe of the inimicitiouſneſs that is between ſilver and ſalt, whereby is cauſed that the ſilver is thruſt out of the lead by the ſame as by its enemy; yet ſo much ſilver is not gotten by that way, no not by the half, as is drawn out by the addition of gold.

For when the gold attracts, and the ſalt expels, there are made two actions together, the one by Sympathy, the other by Antipathy, both aiming at this mark, *viz.* to extract the hidden ſilver and gold out of the lead.

Let there be evaporated in a cupel two ſmall centenaries or hundreds weight, each of like weight; and to one of the centenaries add ſome pounds (of the proportionable ſmall weight as the centenaries are) of pure gold, and there will come from that centenary more ſilver by the help of the gold, than from the other, whereto was added no gold: But the gain by this operation will not be much, or haply none at all; but this is onely to ſhew, that it is verily poſſible, for gold being put upon the cupel with lead, to get ſome ſilver thereout of, and to be more in weight; which effect is produced onely by a ſympathetical faculty. Be now if ſalt doth alſo lend to gold its aſſiſtance, then is there a twofold operation of a double operator; whilſt in extracting of the ſilver out of the lead, the gold is occupied in attracting, and the ſalt in expulſion.

Theſe things were of neceſſity to be laid open by me, foraſmuch as they teach by what means the inmoſt and moſt pure parts are to be ſeparated from the more groſs; ſo that every one may know the natures and properties of things themſelves, *viz.* with what love they imbrace each other, or what hatred there is betwixt them.

By this experiment then, may any wiſe and underſtanding man eaſily learn and believe, that even out of ſalt peter or [any] other white body, the red ſoul may be extracted. Whoſoever therefore ſhall know how to get theſe helpers, *viz.* Sympathy and Antipathy for his purpoſe, ſhall never labour in vain, but ſhall at all times reap fruit by his labours.

And as we have ſhewn that out of any lead, by the help of gold, a good part of ſilver may be extracted; ſo likewiſe may the ſame be clearly proved to be done with the other metals, and which may alſo be effected without the help of gold. Yet nevertheleſs the more fixt metal doth more readily and willingly attract the more volatile and purer part of the other impurer metals, than an unclean metal doth, and even much more readily yet, when there is afore adjoyned to that metal from which any thing is to be extracted, an enemy of that thing which you labour to extract.

Upon this account therefore was I willing to inſert an experiment, that ſo none might account of the thing mentioned as of ſmall moment, but rather that he accurately ponder thereupon in his mind, that ſo he may thereby arrive to things of great moment by a well examining of the ſame.

Now as it hath been clearly and evidently taught that fixt ſilver may be gotten out of any lead, as well by Sympathy as by Antipathy, even ſo may it eaſily be proved, that the ſpiritual gold may be extracted out of other metals, partly by Antipathy, and partly by Sympathy, but much eaſier by Antipathy and Sympathy joyntly together, ſo that one matter may draw unto its ſelf the object it loves, and the other may drive from it what it hates; as we have proved in lead. If then this may be done in metals, why may it not be likewiſe done in other ſubjects.

We will therefore proceed on and ſee, whether or no it can be ſo brought to paſs, that the hidden redneſs may be drawn out of ſalt peter by Sympathy and Antipathy.

Having therefore underſtood by the things already ſpoken, that like draws to it ſelf its like, and is repelled from its unlike, there remains nothing elſe for us to do but to know what that like is, by which ſalt peter ſuffers it ſelf to be extracted.

When we adviſedly conſider the riſe or birth of ſalt peter, it is not to us unknown that it draws its originality from the excrements of animals, but eſpecially from the dung of horned Beaſts, as Cows and ſheep. And foraſmuch as Sheep and Cows do feed onely on Herbs and Graſs that grow in the Fields, and that thoſe vegetables do proceed from the terreſtrial ſalt by the help of the ſolar beams, it is more clearly evident than the Noon-day light, that the hot Sun is the Father of ſalt peter and the cold night the Mother, the earth the Nurſe, and Salt the Food, nutriment and encreaſe of the ſame; the which is to be underſtood as in reference to the *Macrocoſm* or great World. But the vegetables, or all ſhrubs, herbs, and all graſs which ariſe out of the earth in the *Macrocoſm*, cannot be more aptly compared with ought, than with the Hairs and Wool of Men and Beaſts, which are born out of the earth of the *Microcoſm* or out of the animal body, like as the ſhrubs and herbs, and graſs do ſpring forth and grow out of the *Macrocoſmical* Earth. Upon this ſcore, the hairs, hoofs, or claws, and horns of Beaſts; likewiſe the feathers and claws of Birds, and alſo the teeth and ſcales of Fiſhes, do altogether ſquare as to their ſimilitude with ſalt peter; they being ſuch things as whereout of, together with other the ſuperfluous excrements of nature, true and good ſalt-peter may be made with eaſe.

And like as to the procreation of vegetables in the *Microcoſm*, and for their increaſe or growth, there is requiſite a fat and ſalt earth, the warm ſplendor of the Sun, and the fruitfull Rain, whereby all kinds of fruits are born, and ripened; but contrarily by the penury or want of ſalt (it being the onely nutriment,) and of the warm Sun beams, and of the Rain which is the promoter of all fertility, every thing that is vegetable muſt needs periſh and die; even ſo is it in the body of Man: For as long as the heart of Man is in a proſperous healthfulneſs, and that the central fire, or vital ſpirit, and radical moiſture be not defective, all things are well and in good equipage, and the whole body takes increaſe or growth, and the hairs grow plentifully: But on the contrary, when meat and drink fail, the whole body ſuffers loſs, conſumes and withers away and the hairs fall off.

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But to compriſe all in brief, I ſay, that all growths and augmentations as well in the *Macrocoſm* as in the *Microcoſm*, muſt of neceſſity be at a ſtand and leſſen as ſoon as the warm ſolar beams, together with the nutriment it ſelf ceaſeth and is deficient. So then it is a truth, that in Man as being a *Microcoſm* or little World, and in the other amimals, the hairs may be compared with the Trees, Shrubs, Herbs, and Graſs of the great World, becauſe of the great likeneſs that is between them.

And therefore the hairs of animals and hoofs, claws, feathers and ſcales of them are very like to ſalt peter, inſomuch that one part doth after a ſympathetical manner extract from the other, the moſt great virtues and inmoſt ſoul, and ſo one doth manifeſt the other.

For example, when the skin, hairs, claws, hoofs, or nails of a man or any other animal, as likewiſe the feathers of Birds are ſmeared with the ſpirit of niter, or anointed therewithall, they preſently become as yellow as gold, and do as t'were put on a golden hue. It may now be demanded, from whence ariſeth that colour? comes it from the hairs themſelves, or from the niter ſpirit? If that golden colour did ariſe from the hairs themſelves, then it would of neceſſity be, that it ſhould alſo diſcover it ſelf, when the hairs are moiſtened with other ſharp and ſtrong waters; but thus 'twill never do, but onely when they are ſmeared with the ſpirit of niter, or elſe with *Aq. Fortis*, which containeth the niter ſpirit. From theſe things therefore it is evident, that the ſuperfluities of the *Microcoſm* have a moſt notable affinity with the ſuperfluities of the *Macrocoſm*, *viz.* herbs, and graſs. Hence comes it to paſs, that one part draws or ſucks from the other part its beſt virtues and power, and renders them viſible, which afore lay hidden inviſibly and impalpably in their groſs bodies.

XCV. *The manner of extracting out of niter its gold-like ſoul.*

IF we would go the neareſt way to work with niter to extract its ſoul, then the groſs niter is firſt to be mundified by diſtillation, then afterwards out of this purged body is the moſt pure part to be extracted by a convenient magnet, and the groſs fœces to be removed; and this moſt pure ſoul to be brought by concentration and fixation to the utmoſt degree of perfection and dignity.

And albeit I could here ſet down in more clear expreſſions, the manner of extracting it, yet I am not ſo minded to do becauſe of the unworthy. Let this manuduction ſuffice, whereby is ſhown what means it is to be done by, *viz.* by ſome magnet attracting to it ſelf its like by a magnetick operation. I can at all times exhibit ſuch a yellow gold like ſoul of niter, and uſe it in the ſickneſſes of my neighbour. But, enough as touching theſe matters, we ſhall be more large concerning them, in the following Centuries.

XCVI. *How the moiſt and cold fire of niter is to be ſo ordered as to yield its viſible flame.*

PUT ſome ounces of our con-centrated and moiſt fire of niter in a glaſs, and pour thereupon drop by drop a ſharp *Lixivium* made of Wood-aſhes, or rather of fixed niter, and keep pouring on ſo long, till all the noiſe, ſuming, and ebullition ceaſe, and that the moiſt fire it ſelf be wholly allayed and ſlain. This done, all the corroding faculty is taken away from that fire, which ſaid fire doth by this operation return to its former nature, and is changed into ſuch a ſalt peter as it was afore its being converted into a moiſt fire. Out of this ſalt peter, being now made purer and better by ſo many converſions and operations, may a new moiſt fire be extracted by diſtillation and con-centration, which is far better and much ſtronger than the former.

And now if this ſecond moiſt fire be again extinguiſhed with a *Lixivium* of fixt niter, and be again turned into ſalt peter, and this peter be by a new diſtillation and con-centration turned into a moiſt fire, this ſaid fire will be endued with far greater virtues: For in every mortification and vivification it becomes one degree ſtronger, nobler, and more efficacious; and ſo is the ſalt peter it ſelf too by thoſe converſions and reductions exalted ſeveral degrees, and is at length brought to that paſs, that it can do more wonderfull things than the common is wont to do; for one pound of ſuch a ſalt peter being exalted to the utmoſt degree of ſubtilty is far more efficacious than many pounds of common ſalt peter, and ſtronger, and much excels it in virtue. But it is not expedient that every one ſhould know, what may be effected with ſuch a moſt ſubtile and moſt pure ſalt peter.

The ancient Philoſophers hid the preparation and uſe of common ſalt peter; and why ſhould not we alſo hide ſuch a ſalt peter exalted to the utmoſt degree of ſubtilty, wherewith the common peter is not at all comparable, eſpecially in all ſuch labours whereunto the common ſort is wont to be applied, this operates much readiler, and far better and more effectually.

But that the truth may be clearer than the noonday, I will add one operation of a metallick tranſmutation, by which it ſhall be clearly evidenced unto every one what ſuch a moſt ſubtile ſalt peter is able to effect.

XCVII. *An operation ſhewing the manner how by the help of ſalt peter promoted to the higheſt degree of ſubtilty, the ſuperfluous combuſtible ſulphur of the imperfect metals may be kindled and burnt up; even as common fire burns up wood, inſomuch as nothing will be left remaining ſave a little fixt ſalt and aſhes; ſo likewiſe in this burning up of the impure metals by our moſt pure ſalt peter, there remains alſo nothing ſave that fixt gold and ſilver which lay ſpiritually hidden in the metal, and is [now] left by the combuſtible Scoria's.*

EVery one knows that out of the common Salt Peter and Brimſtone, may Gunpowder be made; but yet ſhort in goodneſs, of that which is made of purified ſalt peter. By how much the purer and ſubtiler the ſalt peter is, ſo much the better and ſtronger powder doth it make. The ſame may be underſtood as touching the other uſes of ſalt peter.

Further, every one knows that the common ſalt peter reduceth the common metals into a Scoria by burning them, and waſheth gold and ſilver, and leaves them pure, concerning which fiery waſhing I have hitherto mentioned ſeveral things. But that the common ſalt peter doth perform this waſhing better than the pure, and this pure better and more efficaciouſly than the pureſt, is no ſuch matter in the leaſt, which thing experience will moſt manifeſtly

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open to him who will try the ſame. Verily a ſmall fire will not do thoſe things which a greater will do, nor will this greater effect ſuch things as the greateſt will, and this is ſo evident and manifeſt that there is none dares deny it.

Take one part of the *Regulus* of Antimony and four parts of pure Tin; melt them in a crucible and pour them out, and let them cool; this maſs makes all iron and ſteel fuſile, therefore when you would melt iron or ſteel, fill a crucible with either of the metals, ſet it in a Wind Furnace, and leave it ſo long in the Coles till all the matter wax highly red hot. Then take off the cover and put into the crucible, half as much of the ſaid mixt maſs of *Regulus* of Antimony and Tin, as the iron or ſteel put in the crucible weighed, then put on the cover, and cover it over with the Coles, and urge the fire as ſtrongly as ever poſſibly you can, that ſo the maſs you put in, may cauſe the iron or ſteel to melt. When 'tis all well molten, pour it preſently forth, leaſt the Tin flying away in fume, leave the molten iron, and ſo it returned to its former hardneſs and not ſuffer it ſelf to be fuſed.

This matter conſiſting of the *Regulus* of Antimony, Tin, and Iron, or Steel, is ſo hard, that you may ſtrike fire thereout of with a flint.

Now then if you would experiment the aboveſaid combuſtion or burning up, take a good ſtrong crucible made of potters earth, and fill it with ſalt peter, ſet it on live Coals ſo that the ſalt peter may melt, then having caſt your tin and iron in the form of ſmall rods, heat one end of the rods ſo as not to melt, hold the other end in a pair of Tongs, and put it into the molten ſalt peter, that the iron together with the tin and *Regulus* of Antimony may be burnt up as if it were wood, and vaniſh away with the flame into a fume. For almoſt all tin and iron are a meer ſulphur, and being conſumed by the flame, leave nothing elſe in the crucible ſave *Scoria's*, which being waſhed with water, and boiled on a cupel or teſt with lead and blown off, do leave behind, the true gold and ſilver hidden in both metals.

For when by the flame of ſo pure a ſalt peter, the impure ſulphur of the iron and tin is burnt up, it muſt neceſſarily be that what good ſoever was in the metals do remain behind.

I do not therefore here ſet down this operation, as if I would thereby promiſe any one golden mountains. No ſuch matter. For I onely manifeſt theſe, and ſuch like labours meerly for this end, that every one may know, that ſalt peter being brought to a requiſite purity, is wont to burn up imperfect metals as one burns up wood; and it may be eaſily gathered thencefrom, that ſuch a pure ſalt peter doth as to its virtues much exceed the common peter.

As for ſuch like labours of burning up the imperfect metals by ſalt peter purified in a due manner, and of getting pure gold and ſilver with profit, they ſhall be taught in the following Century (God willing.)

For even as this firſt Century doth for the moſt part treat of fire and ſalt; ſo the chiefeſt part of the following Century ſhall treat of the wonderfull and great efficacy of purified ſalt peter in deſtroying, and reducing metals, and that with great bettering of them, and with no ſmall profit. And albeit I was deſirous of inſerting in this firſt Century, ſuch like profitable betterings of the metals, yet it could not well be done; principally becauſe that there are many other things concerning the profitable uſe of the con-centrated ſpirits of ſalt, that I muſt neceſſarily paſs over here, becauſe the number of this Century is already up, and therefore muſt I refer them to the following Centuries.

And foraſmuch as there is frequent mention made in this Century, of glaſſes and crucibles, which none can be without in the preparing and uſe of theſe moiſt fires, becauſe of the many hazards and loſſes wherewithal common inſtruments are accompanied, for they often break, or elſe eaſily let out or ſpill the boiling matters; it is altogether requiſite that I ſhould here have manifeſted this excellent invention of mine, which preventeth all ſuch diſcommodities; and which I hinted at in the ſecond part of my *Miraculum Mundi*.

But whereas I have beſtowed both thoſe inventions there on the poor, of meer gift, it would be an unjuſt thing to take away from them what is theirs; nay rather they ſhould have by good right more beſtowed on them. So then being not able to proceed any farther as to this caſe, this thing onely remains, *viz.* an affirmation that neither Medicine nor Alchymy can want or be without ſuch excellent Inventions. But yet if any one deſires to have them, he may write to thoſe two men, to whom I have given them, that they may trade for the poor; whatſoever any one that is deſirous of knowing thoſe ſecrets ſhall bargain with them for, he will not be repulſed but obtain his deſire, and purchaſe from them the ſecret; the which proceſs I will nevertheleſs deſcribe, omitting the naming of the matters.

XCVIII. *The way of putting glaſſes in diſtillation and digeſtion, and ſo conſerving them, that the boiling matter be not ſpilt.*

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with this matter fence your glaſs, that the matters you put into them run not out, or be ſpilt, and you ſhall not loſe them.

XCIX. *The manner of preparing ſuch crucibles as will hold metals in flux a long time, and which can neither be broken nor melted.*

R. Saltpeter Coal duſt & good earth or gat Crucible Clay,

mix theſe matters and moiſten them with common water, that they may be converted into a maſs, of which you ſhall (by a crucible mold) frame ſmall and great crucibles, knocking them into your mold with an heavy mallet, according to the manner I deſcribed in the fifth part of my Furnaces. Then take them forth of the mold and dry them in the air, and when they are dry uſe them; for they need not any burning in the Potters Furnace. They will (being rightly handled) ſtand a long time in the coals, and will not chap, neither will they melt with the moſt vehement fire.

C. *An infallible demonſtration, that in ſalt and fire all things lie hidden; or, that by the help of the Sun and Salt all things are generated, ariſe, grow, and encreaſe.*

FOraſmuch as I cauſed to be ſtamped at the beginning of this ſmall work, a circle with a ſquare in its inſide, and with theſe annexed words, *In the Sun, and in Salt are all things*; (the truth of which figure

figure and inscription is sufficiently enough evidenced by the so many operations described in this Century;) it seemed worth while unto me, to make an assertion here in the end of this Treatise by a true and evident demonstration, that all things are procreated, conserved, and encreased by the Sun and Salt, as being the principal and most noble creatures of God; but with this provizo, that there be present the seeds of those things that require multiplication.

For though the Sun and Salt were yet far excellenter and nobler subjects than they now be, yet notwithstanding could they not produce or generate so much as the smalleſt herb or meaneſt worm (to say nothing of a Man) without seed. If we have but seed, then it is permitted us by God, to propagate the same by the Sun and Salt. The begetting of seeds, God hath reserved to himself alone. The seed therefore is for us sufficient, which if we have, we are able to propagate and encrease it even to infinity, by the efficacy of the Sun and Salt, (that universal nutriment of all things.)

The universal medicament and nutriment that the Countrey men use about conserving their Vineyards, Grounds, and Pastures, is the Dung of Cattle and Sheep; from the which Dung being laid to the roots of the Vines and Trees, and thrown into the Fields and Pastures, the Vegetables do attract their necessary nutriment, do grow and bring forth fruits needfull for the support and nourishment of Men and Beasts.

But forasmuch as this nutriment which all the Vegetables do extract out of the Dung of the Beasts is nothing else but a urinous Salt, and that we know how to prepare out of the common Salt, such a urinous Salt which may be used about dunging and fatning the Earth instead of Dung, therefore verily we may be without that said Dung, being but furnished with such a Salt; the which being Alkalizated by the fire doth extend it self much wider, or goes farther, and dures much longer in the Earth, nourishing and dunging it, than the Beasts Dung doth.

Besides it gives to all Fruits and Corn, a far sweeter savour, and smell, than Dung it self doth, the truth of which will easily appear to him that will make tryal of the same. Nay more, and what is of far greater moment; there may (by the help of such Salts) be communicated to Fruits, especially to those that grow on Trees, and to Grapes, a most fragrant odour; if instead of Dung, such Salts be used to the Fields and Gardens, and some spices or other things of a fragrant smell be mixed with those Salts, and put to the roots of the Vegetables. An example will illustrate it more clearly.

Plow up some part of some barren Ground, such as is so for want of Dung; or, even some meer sandy Ground, and throw upon it of the said salt as much as is sufficient, and by plowing mix it with the Earth it self, and sow therein any kind of grain you please, and it will spring up out of the salted Earth or Sand, and be encreased, and recompence the pains taken about it, with an hundred fold encrease of the seed, even just as if you had dunged it, nay better than with the common Dunging.

And now I pray, whence doth that faculty of growing, encreasing, and multiplying arise, save from Salt alone, which you sowed your barren Field withall? For the seed cannot purchase to it self nutriment, and aliment, growth and encrease from the barren Sand and Rain-water onely. And this you may try the truth of very easily, if you fill two wooden Chests or Boxes with common Sand, and put to the Sand in one of them one, two, or three pounds of that inverted Salt, according to the bigness or smallness of your box) and in the other box let there be onely Sand. If now you sow divers seeds in each of the Sands, and set them in the air, moistening them with Rain-water, those seeds will indeed grow out of both the Sand-boxes and get increase, but yet that which grows where it has been sprinkled with Salt is far fuller and perfecter, insomuch that it will hold on its growth till it comes to its utmost ripeness, whenas the other seeds in the other Sand box will by little and little perish and dye.

It evidently appears from hence that the faculty of growing and increasing, in all things proceedeth from Salt onely. If so be therefore, that Pease, Beans, Oats, Barly, Rye, Wheat, Wine, and all kinds of Fruits, do grow, and are increased by the benefit of Salt, it necessarily follows, that Salt is the subject and universal nutriment.

But that it may be understood how the common Salt (which otherwise is wont to corrupt or extinguish all the faculty of growth in those things it is mixed withall) is to be inverted or turned in and out, that its hurtfull corroding property being put off it may put on the nature of Alkalies or urinous Salts, I do here covertly set down the manner of the operation, so that it may remain hidden to mine enemies and be communicated onely to my friends.

Take common Salt, *&c.* [See the Preparation in Append 5. p. *Prosp. Germ.*]

Let them be well heated red hot together at the fire, this done, the salt will be dispoiled of its Acrimony and get an urinous property, and being used in a due quantity instead of Dung, to barren Grounds, causeth that the seeds sown therein produce much fruit. But this kind of dunging requireth frequenter Rains than that which is done with Dung; and therefore it may be better and more commodious in mooriſh places than Beasts Dung, if it may be done, which conjoyns the said salt, and produceth the most wished effects

But especially the said salt is far better for Vines and Fruit Trees than Dung is: for it gives to Grapes, Apples, Pears and such like Tree-Fruits, a far better savour than Dung is wont to afford: Besides, this benefit accrues to Vines thereby, that being sprinkled with that Salt, they have oft times nutriment enough for twenty years, and do every year bring forth Fruit most plentifully: whereas the nutriment of dunging will scarce suffice for five or six years.

Further, That Salt may be far easier, and with much less costs carried and transported into the high Mountains than Dung can; for a far greater quantity of Dung is required than of the said Salt, which said Salt diffuseth it self far larger, or goes much farther than the Dung, and dures longer.

I did this very spring-time last past, put such an inverted salt to some half dead Vines, which being planted in a lean sandy ground could scarce grow up a fingers heighth, and they presently began to flourish, and grew up so fast that the growth was day by day perceptible. When therefore on a certain day I was shewing some Friends of mine the melioration of metals, in my Laboratory, to be effected by the help of common salt, as they were wondring at the thing, I shewed them those Vines afore my Laboratory, that sprang up from the half dead stocks, and

they measuring some of the branches of the Vines, found that in two or three months they were grown some 6, 7, 10, and 11 foot long, and the stocks or stalks whence they grew were two or three times thicker than at first; which great change or transmutation in the Vines, proceeding from the salt, would be more admirable and profitable than that of metals, if we did not look upon that transmutation of gold with such covetous eyes. And forasmuch as this transmutation spoken of, was observed in the month of *July*, and that there are almost yet three months for Vines to encrease and grow; any one may easily conjecture what an encrease the wood [or branches] of the Vines would have in the space of a whole Summer.

But let this suffice concerning the inversion of the common salt, being a most profitable promoter of the growing faculty in all things; the which things I was necessitated to declare here in the end of this small work, that so I might demonstrate those things which I asserted at the beginning of the same, *viz.* that in salt lie all things hidden, and by the seeds of things and the help of the Sun are rendred visible, palpable and essential.

An Admonition to the friendly Reader, or a Proposition not prescribing or tying to any body, whereby is shewn how much benefit the Countrey may in general obtain by my not chargeable extraction of Gold and Silver out of the fugacious or flying Minerals.

THAT my inventions may be in many places profitable for the whole Countrey, I judged it worth while, briefly to declare my meditations or conceptions thereabouts; and to make a declaration of the way or manner which I judge it may most exceeding profitably be done by.

First of all, I suppose it is sufficiently well known that Princes and Noblemen are occupied or troubled with otherguess burdens and business than to employ or busie themselves with the care and enquiry after the metalline mine-pits, that are here and there in the Countries subject unto them. And if they should commit the care of these things to their servants, 'tis likely that they would rather pass their time in feastings or merry meetings, than in a painfull search of Mines and metallick Veins in the woods and mountains. And as for the subjects themselves, seeing they are altogether rude and ignorant of such arts, by what means, and with what success they can undertake such kind of Labours, any one may easily gues. These are the Causes why things of such great moment are let slip without any profit at all, and are plainly neglected. But in my judgment, though it be but slender, any Prince that hath many Subjects under his obedience, may every year gather store of gold and silver, and that without costs, if he would but onely cause a small Laboratory to be erected, wherein the poor Mines may be extracted with due waters; and leave given to such of his subjects as breath after the knowledge of such Arts, to frequent such a Laboratory, and there to learn such Arts, with this *Proviso*, that every one should bring the gold, silver and copper boiled or gotten out of the poor minerals by the help of the said extraction, into the Mony-shop or Coining house, at such a rate as they are every where esteemed or valued at, and not transport it out of the Countrey. Now by this means, not only the chief Magistrate would without any cost and labour get no small profit by the mony, but likewise every body would to their utmost, labour in the inquisition after such poor Mines, that he might get Gold and Silver, and other Metals, out of those poor metallick Veins, and get gain for him and his. But now if the Prince or Magistrate will not permit his Subjects the exercise of such a work, but keep all to himself, any one may easily conjecture, that not so much as a man will set about searching after such Mines, but will rather hide them, especially if the Magistrate (as is wont to be sometimes done) would constrain his Subjects to such kind of Labours.

This (according to my simple opinion, no ways prescribing to any what to doe) would be the readiest way, without hurting of any man (nay rather it would help and assist many a man) of furnishing our Country with Gold and Silver Coin, which Foreigners have made it bare of. But this will not be by any way, unless the Magistrates themselves do make a beginning, as to the institution of such a work, by this means inviting and stirring up their Subjects to undertake such like Labours, which will bring great Treasures even to the whole Country. By this means may rich Mints be set up in very many places, instead of those which at this time afford Mony or Coin so sparingly, and no small portion of Copper too, mixed with it.

These few things was I willing to advise for the sake of the good of the whole Country; only laying down my simple opinion without prescribing a rule to any, hoping, that no body of what rank or condition soever they be, will take it otherwise than well.

Secondly, Every Prince and great man would mightily promote the common welfare of his poor, if he would but take the care of shewing the way of so inverting common Salt by one hours heating it red hot, and bringing it to that pass, that it may be made use of instead of Cattles dung, for the fatning and bettering of barren Vineyards, unfruitfull Gardens, and other Fields that are backward or slow in bearing Fruits: for verily, even from this very Art would redound much profit to some Countries. For many Vineyards here and there, and many Grounds do want due tillage because of the scarcity of Dung, whereas otherwise they would prove very profitable both to the Subjects and Magistrates, if they could be fatned and made fertile by this kind of way.

Besides too, all Wines would be had in much more plenty, and be of a far sweeter and pleasanter taste, by such a medium, than if the Vineyards and Fields were dunged with Beasts dung. But as touching this thing, see more in the continuation of my *Miraculum Mundi*.

The end of the First Century.

The Second Century

OF

GLAUBER'S

Wealthy Stoze-houſe of Treaſures.

Which doth Illuſtrate his hitherto publiſhed Writings, with a more evident Explanation, and doth more clearly demonſtrate the Truth hidden in them.

The Firſt *Arcanum* or Secret of the Second Century,

SHEWETH,

By what means ſuch Metals as are imperfect, wild, and in a manner unapt for uſe or ſale, may be ripened or bettered by Common Salt and Fire, ſo as to yield forth Gold and Silver with benefit and advantage.

I have in the foregoing firſt Century, as alſo in the Appendix to the fifth part of the proſperity of *Germany*, deſcribed the incineration or reduction into aſhes, which is to be done with Coals in a peculiar Furnace, fit for torrefaction or calcining.

Though this be a laborious way and tedious, yet is it not without its benefit, provided that a great quantity (as I have already oft times ſaid) of the not vendible minerals and metals be thereto uſed. But that ſuch an incineration may be done after a more eaſie and compendious manner, the following way may be made uſe of.

Build an Hearth of good and fitting earth upon a firm foundation, put thereupon a Furnace [or an Arch] of good ſtones, adjoyn hereto an Oven, [or ſide Furnace] out of which the fire may play and emit its flame over all the ſaid Hearth, and paſs thereout of by a Chimny made for that purpoſe. Upon this Hearth put thoſe metalline earths being broken in a Mill, and commix them with the Salt, and Coals reduced into powder, and leave them for twenty or twenty four hours, that they may be all well fired and heated red hot: For by this means, the ſalt makes the fugitive metal in ſome ſort conſtant and able to brook the fire; and the wild ſulphureouſneſs leaves the metalline mineral, and adjoyns it ſelf to the ſalt, and converteth it into a vitriol or *Sal. Mirabilis*. This twenty or twenty four hours heat, gets a conſtancy and fluxibility to thoſe wild metallick veins, and doth withall by that labour ſo fit and prepare the ſalt, that it doth afterwards by an eaſie mutation paſs into good ſalt peter.

After that the ſaid minerals have gotten themſelves a better ſtate by the ſaid Cementation, they are to be drawn out of the Fire or Hearth, with iron inſtruments fit for ſuch a purpoſe, and new and freſh minerals are to be put in, and to be dealt withall after the ſame manner as we ſaid but now.

The minerals that are taken forth are to be broken in a Mill, and then the ſalt to be waſhed off with common water, and to be afterwards uſed about making ſalt peter, the which we have taught in the Appendix.

The light Coals [or Scinders] and unprofitable earth is to be ſeparated by water, from the metalline part, and this metalline part, or heavier *limus*, being reduced and molten in the Furnace called *Stichofen*, yields a beautifull or pure and gainfull metal.

There are ſometimes found in many places of *Germany*, wild, fugacious, and unmeltable minerals of lead, which for that they contain in them Sulphur, Antimony, or *Lapis Calaminaris*, do not admit of reduction in the Furnace called *Stichofen*, but do either go off in fume, or turn into droſs. But being firſt roaſted after the aforeſaid manner, and fitted for liquefaction, the lead, comprehending in it ſilver too, may be thence gotten with profit, whereas otherwiſe they are wont to be dealt withall without any fruit, and are therefore given over. This

incineration

incineration therefore is profitably uſed to ſuch degenerate minerals.

Now if ſo be any would deal with vendible and good metals, and would have profit from them by incineration, he muſt proceed this following way.

II. *The manner of reducing lead into aſhes, and ſo handling it with the ſpirits of ſalt, that gold and ſilver may be thence gotten with profit.*

I have at large taught in my firſt Century, that in the ripening of metals and other chymical operations, a greater fire is endued with ſtronger power than a leſſer, which is eaſie to be underſtood by thoſe that have any wit.

I juſt now taught the maturation and bettering of unprofitable and wild metallick earths with crude and groſs ſalt.

But foraſmuch as the groſs ſalt and a weak fire cannot of neceſſity put forth ſo much ſtrength as a ſtronger fire is wont to doe, therefore for ſuch as deſire a ſtronger fire than the common ſalt, the purer part is to be (by the help of Art) drawn out of the crude ſalt and to be ſeparated from its groſneſs and impurity, the which is eaſily brought to paſs by diſtillation. And as for theſe fires of ſalts, and the procuring them in great plenty, my writings, but eſpecially the precedent firſt Century, do clearly and evidently treat of them, and this ſecond Century will yet treat of it more.

III. *The operation of incinerating the lead, or reducing it into aſhes.*

HAving built a Furnace ſuch as is for Cementation, put therein a ſtrong iron Pot, juſt after ſuch a manner as the ſand cupels [or pans] are wont to be made, let there be a Grate to make a fire on, let the Furnace be bigger or leſſer according to the bigneſs or littleneſs of the Pot you would put in, or according to the quantity of lead-aſhes you would make. Put fire under the Pot and heat it red hot, and put thereinto ſo much lead as is requiſite for the covering of the bottom of the Pot; the lead being molten, ſtir it about in the Pot without ceaſing, with an iron ſpoon having a long handle, the which labour will turn the lead into aſhes in the ſpace of about two hours. Take theſe aſhes out, and put in more lead into the Pot, and repeat this labour ſo often untill you have gotten enough aſhes. Theſe aſhes of lead are fitted to receive an amendment by the ſpirits of ſalts, and afterwards to yield their gold and ſilver by fuſion, and that with profit.

IV. *The manner of bettering the aſhes of lead by the ſpirits of ſalts, and of extracting thencefrom the gold and ſilver with gain.*

FIrſt of all, you muſt have plenty of the ſpirit of ſalt or *Aq. Regis*, as concerning the eaſie getting ſuch ſpirits, we have mentioned the way at large in the foregoing Appendix, and will yet treat more of them in this preſent ſecond Century.

Beſides, you muſt alſo provide your ſelf of red or reddiſh kind of flints, which (beſides iron) do alſo contain in them a volatile gold. Out of theſe is the tincture to be extracted by the ſpirit of ſalt, or by *Aq. Regis*; after that manner I delivered at large in the firſt Century, and in the Appendix to the fifth part of the proſperity of *Germany*, and will yet farther teach more clearly and more compendiouſly in this Century.

Theſe extractions are to be poured upon the lead-aſhes, that they may be well moiſtened therewithall; the unprofitable phlegm is to be evaporated by a gentle heat, and the fire to be augmented that the ſpirits alſo may follow; of which more heavy ſpirits there will be enough remaining in the ſecret Cementatory Pot, and as much as is ſufficient for the due operation upon the lead, that ſo being bettered it may afterwards prove a gainfull emitter of its gold and ſilver.

He that has a deſire of exerciſing this labour with greater profit, may ſatisfie his deſire, if he will but pour on ſuch extractions twice or thrice upon the ſaid lead-aſhes, that they may be con-centrated by them afore they are cemented in the Cementatory Veſſel, and may be reduced into the bettered lead. For by this means, all the labours and coſts will be more largely recompenced, and the more plenty of gain gotten.

This now is the making the lead-aſhes, whether you do either *per ſe*, or by the help of the other metals, convert it by Cementation into a better metal.

V. *A brief deſcription of the ſecret Cementatory Pot, which admits not of any ſpilling, and which is ſealed with the Seal of* Hermes, *of which I made mention in the firſt Century.*

BUild with Stones or Clay or Potters earth ſuch a Furnace as that is, which I deſcribed in the firſt part of my Furnaces, as neceſſary for the making of ſpirit of ſalt. But let the lower part thereof be a little broader that ſo the Metals being caſt upon the Coals may not ſtick to the walls of the Furnace and ſo be ſomewhat loſt, but may fall directly down on the live Coals. It muſt be made four ſquare and of ſuch a bigneſs as may ſerve the purpoſe according as you are minded to cement a greater or leſſer quantity of metal therein.

VI. *Of the Cover of the Cementatory-pot, what it ought to be, that ſo it may ſuffer nothing to goe away in fume.*

THIS Cover of this Cementatory Box or Furnace which I told you was to be made of the Lute of Wiſedom, is not properly a Cover but a Leaden Ciſtern, ſerving for the reception of thoſe ſpirits which are driven up by the fire out of the Lead-aſhes. This Lead-receiver is to lie in another Leaden Ciſtern, which is to be filled with water, and 'tis to be ſo fitted to a pipe that is to come out of the Furnace, that the aſcending ſpirits paſſing thereinto may be the better refrigerated by the water, and the ſooner condenſed, and ſaved for farther uſes.

VII. *Of the uſe and benefit of this ſecret Cementing Pot.*

WHEN any one has a mind to cement the Lead-aſhes, from which the extractions of the coloured Flints have been ſometimes abſtracted in the ſaid Cementatory Box, and to graduate them, or ſo bring to paſs that they may contain [or hold the] Gold and Silver, let him firſt of all fill his Furnace with Charcoal, and let him ſo order it that his fire may kindle by little and little till the Furnace be well heated red hot; till this is done, the Cover that is at top is to be taken ſo long off, that ſo neither the heat

heat nor ſmoke may paſs out at the ſide through the Pipe into the adjoyned Leaden Ciſtern.

When the Furnace is thoroughly heated, and that 'tis now time to begin the Cementation, the top of the Furnace is to be ſhut with its Cover, that the heat may be forced to paſs through the Pipe into the Receiver. Having ſo done, you are to fill an Iron Spoon or Ladle of your prepared Lead-aſhes, and put them into the Furnace at the fore-hole which ſerves for the throwing in your Coals, the which aſhes are to be ſo put in as to cover the Coals over, but not ſo as to choke them but that they may have air enough to burn, and that the fire be not put out, but doe juſt in that manner as you are wont to diſtil the Spirit of Salt. By this means all the Spirits that remained yet behind in the Lead-aſhes, will betake themſelves into the Receiver, and the Aſhes of the Lead will be bettered by the graduating and tinging ſpirits, and will part of them be reduced into a body, and part will yet retain the form of aſhes, and fall down through the Grate to the bottom of the Furnace. Then the Furnace is to be again filled with Coals, and more Aſhes are to be put thereon with a Spoon as afore, and this labour is to be continued ſo long till all the Aſhes are conſumed.

All the labour being finiſhed, take out your Aſhes together with the lead reduced into a body, melt them in the Furnace which is called *Stichofen*, they will melt wondrous eaſie, then put ſome ſmall part thereof to the Teſt, thereby to try whether or no they are enriched enough, to be turned into a Litharge and undergoe the metallick ſeparation.

If they won't as yet brook the trial, let the Lead be again turned into Aſhes in your Iron Pot, and repeat the whole afore preſcribed labour, and that ſo often till at length the Lead be rendred rich enough in Gold and Silver, the which may be converted into Litharge after the uſual manner, and ſeparated from the Gold and Silver. The Litharge being taken away, and gathered together, and broken in a Mill, ſerves for farther uſes in this operation. The *Regulus* of the Gold and Silver that is left upon the hearth is to be taken out and to be farther mundified in a Cupel after the accuſtomed way.

This is that more compendious incineration and reduction of Lead, which kind of bettering it, enricheth the operators with Gold and Silver.

N. B. That in this Cementation the ſharp ſpirits do carry over with them ſome of the Volatile Lead into the Receiver, and there it ſettles to the bottom; the which powder being freed from all the Acrimony of the ſpirits by due waſhings, and being then dried, may be uſed to all ſuch intents and operations to which the Mercury of Saturn is wont to be uſed, and which is made by diſſolving the Lead in *Aq. Fortis*, and precipitating it by Salt-water.

N. B. This diſtilled Mercury hath more hidden under it than the other hath; for it carries hidden in it a Volatile Gold, which may be ſeparated from it and improved about the gradation and Tincture of other Metals, and that with no ſmall profit, concerning which we will ſay more afterwards.

Thus, friendly Reader, haſt thou my more compendious incineration and reduction into better Metals, the which I would not hide from thee, and hereby ſhall I ſatisfie thoſe to whom the way preſcribed in my Appendix is too tedious and laborious and they may make uſe of this way inſtead of that other, which withall is eaſier and will without all doubt yield more Gold and Silver than that other way.

VIII. *Another emendation or bettering of Lead by the graduating extractions of coloured Flints.*

EXtract either coloured Flints, ſuch as have in them Volatile Gold or Sand or Clay, by the ſpirit of Salt or *Aq. Regis*, and draw off the Liquor by Diſtillation. If you thereto add Salt afore their extraction the diſſolvent will receive encreaſe from the Salt, eſpecially if done in ſuch an inſtrument, in which a great quantity of extracted matters may be abſtracted in a few hours, without either Cucurbits or the other commonly known diſtilling Veſſels, and the ſame operation may be continued a long while. By this means, there is not onely the leaſt loſs of your diſſolvent, but it rather gets no ſmall encreaſe from the Salt. By this inſtrument alſo, thou maiſt not onely prepare great ſtore of ſharp ſpirits neceſſary for thy operation at the beginning, but likewiſe commodiouſly extract your Minerals, and ſeparate the diſſolvent again from the Minerals ſo extracted, ſo that you ſhall not loſe the leaſt particle of your diſſolvent.

But foraſmuch as all the Gold, Silver, and Copper may much eaſier be ſeparated from its *Menſtruum*, by this ſo unheard of and never ſeen inſtrument, than by the way of precipitation, 'tis altogether better and ſafer for a Man not to precipitate his extracted Metals, but rather draw off the *Menſtruum* from them, that ſo he may have them dry. And though that all the ſpirits go not wholly off, ſo as that nothing of them abide with the Metals, yet they do no hurt, but rather exalt the Litharge that is put unto them into an higher degree, as it alſo does to the Aſhes themſelves of the Lead, when they are cemented together in the afore deſcribed cementing Furnace; in which Cementation the Volatile Gold is, together with the corporal Gold conſerved, and which otherwiſe would vaniſh away in the common melting Fire.

But if ſo be that any one has a mind to precipitate the Metals extracted out of poor Mines, after the manner preſcribed in the Appendix, to the intent he may after the precipitation make Salt Peter of the remaining Waters, he may reduce the *Calx*'s of the Metals, and principally of the Gold very eaſily and without any loſs, by this following way.

IX. *The manner of reducing the precipitated and waſhed* Calx *of* Sol *without any loſs.*

THE precipitation of Gold by *Lixiviums*, Liquor of Flints, Spirit of Urine, Solution of Mercury, hath been clearly enough deſcribed in the Appendix to the fifth part of the proſperity of *Germany*; but yet the reduction of the ſame was paſt over in ſilence, becauſe of the too much haſt of the ſaid Book. Therefore it ſeemed unto me neceſſary to inſert the ſame here, for their ſakes, who have but little knowledge, or in a manner none at all in theſe affairs; for ſhould I go to propound ſuch a thing for the skilfull Chymiſts, I ſhould but do what is already done, eſpecially becauſe he deſerves not the name of a Chymiſt who is ignorant of the reduction of the ſolar *Calx*.

But foraſmuch as it may ſo happen, that even the unskilfull may ſet about this extracting of the Minerals, and yet be ignorant of the way of reducing the Gold though they ſhould have extracted it; therefore have I judged it not amiſs to illuſtrate that re-

duction by my deſcribing thereof here, the which being divers, according as the precipitation is made by ſuch or ſuch a means, doth alſo require different operations.

X. *The reduction of the ſolar* Calx *precipitated by the Liquour of Flints.*

ALbeit that Borax reduceth every *Calx* of *Sol* to its former body, if it be therewith mixed and melted in a Crucible, yet that would prove too dear, if ſomewhat a greater quantity thereof be required for the reduction; for there muſt be of it at leaſt twice or thrice as much in weight as is of the Gold, if you would have a due reduction of the Gold made. The reaſon is this, becauſe the Flints precipitated to the bottom together with the Gold, and ſo ſticking on to the Gold impead its fuſion ſo that it cannot rightly come together into its due body. Hereupon is it neceſſary that there ſhould be the double or treble weight of Borax added to the Gold if you would have all your Gold return unto its former body without detriment.

But whereas there are alſo other matters to be found which make the Gold fuſible and are not ſo dear as Borax is, the uſe of ſuch things is to be admitted, but eſpecially when a great quantity of Gold is to be reduced. Otherwiſe if it be but little Gold that is to be reduced, and you have not the aforeſaid matters at hand, one may for ſuch a ſmall trial uſe Borax. But where there is a greater quantity to be reduced the following matter will be found to be far more profitable and beneficial.

XI. *How the Gold which is precipitated by the Liquor of Flints, is to be melted without Borax, by the Glaſs of Lead only, which is of a far meaner price.*

TAKE of your Gold precipitated by the Liquor of Flints and dryed, one part, of Glaſs made of Lead and beaten into powder, three parts; the which mix well with the Gold and put into a Crucible, which ſaid Crucible let be put into another bigger one (for which operation the Haſſion pots are moſt fit) that ſo if the Gold chance to flow out of the inner pot, it may ſtay in the outer and be conſerved. For the Glaſs of Lead is of ſuch a nature that it uſually perforates or runs through the pot. Having thus done put your twofold Crucible containing your commixed matters into a wind Furnace, ſuch an one as I have deſcribed, and when you have covered it, put Coals under it [or about it] and urge your fire for one quarter of an hour, that all may well flow, then pour it out, and ſeparate the *Regulus* of Gold with a ſtroke or two from the glaſs of the Lead; which ſaid Glaſs hath attracted to it ſelf all the flinty matter, and ſuffers the pure and malleable Gold to ſettle to the bottome into a *Regulus*.

N. B. If your glaſs of Lead be ſtill yellow as it was before the operation, 'tis a ſign that all the Gold is ſeparated therefrom; but if it be of a green colour 'tis a ſure ſign that it has as yet ſome Gold mixed with it. For Gold being mixed with Glaſs ſhews its being there by yielding a skie-colour, the which skie-colour is neceſſarily changed in the yellow glaſs of Lead into a green; becauſe every yellow and skie colour do in their commixtion beget a green.

Now then that you may get out the reliques of the Gold out of the leaden Glaſs you muſt proceed the following way.

XII. *By what means the Glaſs of Lead which as yet contains in it ſome reliques of Gold is to be dealt withall, that it may let them goe out of its body.*

MELT that Glaſs of Lead in a well covered pot, that I mean in which you ſuppoſe ſome Gold to be, and being well molten caſt in a little iron filings, and mix it well by ſtirring it with an iron rod, and leave it in the fire thus molten, for one quarter of an hour, that the ſulphur of the Glaſs may be killed by its corroding of the iron, and may let fall a leady *Regulus* wherein the Gold will be, and which (in the firſt melting) the Glaſs held up, will ſeparate it by the Cupel from the Lead.

N. B. But here you are to obſerve that the filings of the iron are to be uſed very ſparingly to this precipitation; for by how much the more iron is added, ſo much the greater will the *Regulus* of the lead be, and conſequently require a greater Cupel, which is not ſo neceſſary.

For put caſe the Glaſs of Lead in which the Gold is ſuſpected to be is about one pound weight, and there is but about a *Quinta*, or certain ſmall weight of Gold; now it is not neceſſary to have any more than one Lot of Lead or thereabouts, precipitated thereout of into a *Regulus*, to which precipitation is required no more than one Lot of the filings of Iron. For the *Regulus* of Lead precipitated out of the Glaſs, doth for the moſt part anſwer in weight, to the weight of the Iron filings uſed about the precipitation, or to ſpeak more clearly, you will get ſo much leaden *Regulus*, as the Iron is you added.

The remaining Glaſs becomes black and is unprofitable for any farther melting with Gold, but yet needs not be caſt away, becauſe thoſe *Scoria*'s do yet contain much Lead, and therefore ſerve to be mixt with ſuch Pots as you have uſed and broken about Metals, or with other wild and hardly fuſile metallick Veins, to render them fuſible, being I ſay commixt with theſe, and put in the Furnace which the *Germans* call *Stichofen*, do not onely yield forth all their Lead, but withall draw out the Metals out of thoſe matters which were mixed with them in the melting. But they are principally profitable for the melting and reducing of thoſe Metals, which do not onely very difficultly admit of fuſion by themſelves, but withall do, being mixed with the Aſhes of Tin, ſo much the more difficultly ſuffer themſelves to be reduced by melting, unto their former bodies. But in defect of ſuch Metals and Minerals, as are not but with much adoe tamed by Liqueſaction, you may put to that black Glaſs of Lead, one fourth part onely of filings, or *Scoria*'s of Iron made into powder, that ſo both the matters thus commixt may be molten in the Furnace *Stichofen*. So by the addition and help of the Iron, all the Lead will be reduced to its former body, and will withall extract out of the Iron whatſoever of Gold and Silver lay therein hidden; ſo that by this means there may be reaped a great benefit from this reduction of the Glaſs of Lead. But yet that Lead is to be tryed by a foregoing tryal, whether or no it be rich enough in Gold and Silver to quit the the coſts of ſeparation? For if it be not, it muſt be uſed to the afore deſcribed incineration, that ſo there may be no loſs either of the Gold or the Lead.

XIII. *The*

XIII. *The preparation of the Glaſs of Lead, for the reducing ſuch Gold as being precipitated by the Liqour of Flints, is of difficult fuſion.*

TAKE of white and fuſile Flints [or Pebles] one part, and of *Minium*, or any other Aſhes of Lead, or elſe even of Litharge it ſelf four parts, each of which being powdered apart, you are to commix and melt them well in a ſtrong double Pot, then pour them out, and you will have a Hyacinth-coloured Glaſs, the which Glaſs is to be powdered and mixt with the Gold, and it makes the Gold Powder which reſiſteth melting fuſible.

XIV. *Another way of reducing Gold precipitated by the Liqour of Flints.*

TO one part of this hardly-melting Gold which is precipitated by the Liqour of Flints, admix two or three parts of Litharge, which matters put in a ſtrong double Pot, and cover it well, and melt them well down in a Wind Furnace, that the Litharge may draw unto it ſelf all the Flints, and all the Gold may ſeparate. Having ſeparated the *Regulus* from the *Scoria*'s of the Lead, you muſt precipitate theſe *Scoria*'s, which do as yet hold in them ſome ſmall portion of Gold into a ſmall leaden *Regulus*, with the filings of Iron, as we ſhewed you but now, that ſo you may alſo have even that reſidue of Gold. The *Scoria* are conſerved by being reduced in the Furnace *Stichofen*, according to the operation already ſpoken of.

XV. *Another way of rendring the Gold precipitated by the Liqour of Flints fuſible.*

TAKE of the ſaid Gold one part, and the fixt Salt made of Salt Peter and Tartar, by combuſtion or calcination, three parts; commix them and melt them down in a crucible well covered. In this co-melting the Salt ſwallows up the Flints, and the Gold being at liberty ſettles to the bottom. Pour out the molten maſs, and ſeparate the *Regulus* of the Gold from the Salt, the which being diſſolved with common water gives you your Liqour of Flints, to be again uſed to precipitate more extracted Gold.

This Salt doth not ſo eaſily perforate the Crucibles as thoſe Glaſſes of Lead do, and therefore is it to be accounted of as the beſt and eaſieſt of all theſe three preſcribed ways.

XVI. *The way of reducing Gold, precipitated by the ſpirit of Urine.*

THE ſpirit of Urine or of *Sal. Armoniack* doth perfectly precipitate all the Gold out of the *Aq. Regis*; the which being waſhed and dried, doth not admit of reduction after the manner of the other Gold, for if it be but onely heated a little before it becomes red hot, it preſently takes fire, and fulminates with a far more dreadfull noiſe than any Gunpowder. For if you put a ſmall portion of the ſame, and no bigger than a Pea in a Silver, Iron, or Copper Spoon, and put it on the Coals that it may wax hot, it will give ſuch an horrible crack, that 'twill even dull the hearing, and make a dent in the Spoon as if it had been beaten in with a Hammer. From whence it may eaſily be conjectured, that if ſomewhat a bigger quantity be put in a Pot on the Fire, it would make Pot and Furnace flie, by its ſo dreadfull thundring a ſtroak into moſt ſmall ſhivers.

So then there is need of great warineſs, to prevent the happening of ſo great danger, which is eaſily prevented by the following manner of operating.

XVII. *By what means the fulminating force of Gold precipitated by a* Lixivium, *or ſpirit of Urine is to be taken away.*

MIX with this Gold precipitated by a *Lixivium*, or by the ſpirit of Urine, half a part of Sulphur reduced into Powder, and let the ſaid Sulphur be removed therefrom by burning amidſt live Coals; for ſo being deſpoiled of that fulminating force, it may without danger be reduced by any kind of ſuch matters as promote fuſibility.

XVIII. *By what means Gold that is deſpoiled of its fulminating force, by means of Sulphur may be reduced.*

FOraſmuch as this Gold is void of all impurity, there needs [not] the addition of ſuch matters as promote fuſion, ſeeing it is of it ſelf prone enough to melt. But yet leaſt ſome grains of the Gold ſhould ſtick on to the Pot, 'tis expedient to add ſome portion at leaſt of ſuch a kind of matter as accelerates or haſteneth fuſion. And for this work, Borax, and the dry Liqour of Flints are excellent, of which if you add but one half part onely to ſuch Gold, (or, if you take of the Flints prepared with Salt of Tartar) it will by that means preſently melt, and the Borax, or Liqour of Flints will not retain the leaſt doit of the Gold.

XIX. *The manner of reducing the Metals that are not gotten out of the Waters by precipitation, but are freed from them by abſtracting them.*

THE Metals which are extracted out of the Mines, and freed from the waters by the abſtracting of the diſſolvent, cannot be ſo pure as thoſe are which ſettle to the bottom by precipitation. For it is very rare for Gold and Silver to be found in metalline Veins, Stones, or Clay, without being commixed with other Metals; becauſe for the moſt part, Copper is mixt with Silver, and Copper or Iron with Gold, the which being unſeparated in the reduction makes the Gold and Silver impure. But now in the precipitation one Metal is freed after another from the *Menſtruum*, and are not mixed with each other. But on the contrary, in the way of abſtracting it, all the metals remain mixt together without any ſeparation, and require a new ſeparation and conſequently a double labour, and more expences.

This inconveniency may be eaſily remedied by him who is verſed in the knowledge of my dry ſeparation of Metals. I have mentioned it in divers places of my writings, ſo that it would be needleſs to trouble the Reader with a ſuperfluous rehearſal of the ſame in this place.

But foraſmuch as every one hath not by him all my writings, I believed that it would be worth while, if I ſhould here ſet down that Laver or Bath which waſheth off the Metals with the help of Salt peter by the dry way. For, without the knowledge of this Artifice of ſeparating the extracted Metals from each other, there would be yet requiſite much labour, and much coſts for the obtaining of the ſaid Metals.

Metals. But they are very eaſily, and with little labour, and with ſmall coſts ſeparated the one from the other by the way here by us deſcribed, and indeed with more gain than is wont to be had by the way of precipitation.

And even as in the precipitation of Metals there is always ſome [portion] of the Waters, that puts on the nature of Salt Peter, *viz.* when the Waters that have been uſed, which are as it were the Seeds of Salt Peter, are implanted in an Alkaliſate Salt, and ſo do multiply themſelves in a wonderfull manner.

So likewiſe in the dry ſeparation of Metals, there is in a manner, yet more Salt Peter gotten, *viz.* thus when they are ſeparated in the melting Pots, from each other by Salt Peter, and by an artificial precipitation of one Metal after another, the Salt Peter you uſed is rendred fixt and Alkalizated, which Alcalizated niter is to be accounted of, as the root of Salt Peter. This root being implanted in acid Salts, is in like manner enriched with a plenteous encreaſe, and reduced into natural and inflamable Salt Peter; for, by it do the ſharp Waters get to themſelves the nature of Salt Peter, from thoſe Alkalizate Salts. And if ſo be you ſeek not after the common Salt Peter, it is better to ſow the Seed of Salt Peter (that is, ſome ſpirit of niter which you have uſed) into the appropriate root of Salt Peter, that is, into fixt niter. For by that means you will have (at the encreaſe) a wonderfull Salt Peter, which, in all operations, doth far more powerfully act than the common Salt Peter, what way ſoever it be mundified by; which is evidenced in my foregoing firſt Century.

Therefore foraſmuch as in the ſeparation of Metals by the dry way, there remains (after the operation is over) ſo much fixt Salt Peter as there was of nitrous Water in the moiſt extraction, it always abundantly ſupplies both Seed and Root of Salt Peter, ſo that they may be exceeding plentifully multiplied by other Salts, nor will you have any need of buying any more new Salt Peter for the now ſpoken of Labour. Verily this is a moſt compendious way, not onely of ſeparating all Metals even in fuſion, but alſo of ſomewhat bettering them, as ſhall be afterwards demonſtrated.

XX. *By what means ſuch Gold as is commixt with Iron, or Copper, and from which (being extracted out of the Minerals) the diſſolvent has been drawn off, is to be reduced.*

LET ſuch unclean Gold be commixed with two or three parts of its weight of the Glaſs of Lead, and melt them in a ſtrong Crucible. If there happen to be much Iron, it will of its own accord yield a leaden *Regulus*, which being forced by the heat of the Fire in a Cupel will leave your Gold pure, becauſe the Glaſs of Lead is wont to attract unto it ſelf Iron and Copper. But if ſo be there is but little Iron mixt with your Gold the *Regulus* of Lead will not ſeparate or precipitate in the melting, and therefore as it melts ſome filings of Iron are to be added, and to be accurately ſtirred with a red hot Iron, that ſo a *Regulus* of Lead may fall to the bottom, bigger or leſſer according to the muchneſs or littleneſs of the Iron you added.

XXI. *Another proper and fitting matter to reduce ſuch Gold as hath Iron in it.*

TAKE of Salt Peter one part, and of Antimony four parts, reduce them into a black Glaſs, by melting them. This Glaſs being powdered and commixt with a wild or raw and not fuſile Gold and ſo molten, precipitates the *Regulus* of the Gold to the bottom, and brings the Iron into *Scoria*'s.

XXII. *The ſeparation of the Antimony from the Gold.*

SUCH golden *Regulus*'s do not admit of ſeparation in the Cupel, like as thoſe do which the Glaſs of Lead is uſed to. Therefore Salt Peter is to be uſed in the melting Pots or Crucibles, to make the ſeparation of them.

Put this Antimonial *Regulus* in a melting Pot, melt it down in a Wind Furnace, and being molten caſt in by little and little ſome dry Salt Peter, that ſo it may ſeize upon the *Regulus* and tranſmute it into *Scoria*'s. The *Scoria* flowing in the Pot like water, are a ſign that the Gold is well cleaned, and that all the Antimony is reduced into *Scoria*'s. Then pour it forth into a Cone that it may cool, and the pure and malleable Gold will ſettle into a *Regulus* at the bottom. Now all the Salt Peter is rendred fixt in this operation, then if you put your *Scoria*'s again in the Crucible, and put into it ſome Coals and melt your *Scoria* down, almoſt all the Antimony being freed from the Salt Peter will gather into a *Regulus*, and will again ſerve for reducing of more Gold; for it will as readily reduce your extracted Gold unto its former body, as the [aforeſaid] Glaſs it ſelf will. But this labour requires a diligent Operator who knows how to handle it with ſingular skill, though it be eaſie, and requireth not any great Artifice, but onely an accurate diligence, which uſe onely makes a Man skilled in.

The Salt Peter uſed about this labour, gets the nature of an Alkali Salt, and being put on the live Coals doth no more burn, but being diſſolved in Water yields a ſharp *Lixivium*, very proper for many operations, and ſerving inſtead of a Lye made with Wood-aſhes. But the chiefeſt uſe thereof is this, *viz.* ſeeing it is the true root of Salt Peter, it may be added to other Salts, out of which in proceſs of time, it will be notably augmented and produce new burning Salt Peter. He that has a deſire gainfully to augment this fixt Salt Peter with common Kitchin Salt, and again to tranſmute it into inflamable Salt peter, may accompliſh his deſire if he makes uſe of the following operation.

XXIII. *The way of making moſt excellent and inflamable Salt Peter in plenty, and with profit out of common Kitchin Salt and the* Lixivium *of Salt Peter that has been uſed.*

THere is ſo ſmall a difference betwixt common Kitchin Salt, and Salt Peter, that the Salt may eaſily be turned into Salt Peter, and that by ſeveral operations, as well by the ſeed of Salt Peter as by ſharp ſpirits, as we have taught above, or even by fixt niter which operation we will here ſhew.

We will uſe for an example, the baking of Bread, and the brewing of Ale. If when the Meal is with Water brought into Dough, there be added unto it but a few grounds of Ale or Leven, the whole maſs begins to heave it ſelf up, and becoming thin [or light] is rendred fit to be baked into Bread, the which hath altogether the ſame property as thoſe few Ale Grounds, or that little Leven had. And ſo that very ſelf ſame Dough is likewiſe fit to make other Meal ferment, even to infinity. The ſame is likewiſe

likewiſe obſervable in the brewing of Ale, ſo that he who hath but once onely ſo much Ale Grounds [or Yeſt,] or levened Dough as ſerved his turn once, may brew Ale and bake Bread even to infinity. So likewiſe is the ſame evidently manifeſt by the encreaſe of Vegetables, which may be infinitely multiplied by the Alkalizated Salt of the Earth, if you have but once their Seeds and Roots. In like manner may the ſame propagation be performed by another way, *viz.* by ingrafting of that which you would propagate into another of the ſame kind. For example, I have in my Garden excellent Apples, Pears, Cherries, or ſuch like Tree-fruits, and I have a mind to ſee more of them in my Garden; therefore do I cut off ſome branch, or perhaps even the Tree it ſelf to the trunk or body, of ſome wild, or at leaſt not ſo noble a Fruit-bearing Pear Tree or Apple Tree, and therein, *viz.* in that branch or ſtock, do I ingraft according to Art ſome little boughs or cions of ſome other Tree that bears excellent Fruit, and which I deſire to encreaſe, the which Tree now doth no more produce the wild and degenerate or bad Fruits, it did according to its kind, but ſuch Fruits as the Tree whence the cion was taken, bears.

By theſe kind of ſimilitudes may any one that hath underſtanding eaſily ſee, that it is poſſible by Art, to tranſmute one nature into another, if, *viz.* the Seeds and Roots of things are applied to this tranſmutation. But now if any one ſhould plant a ſtalk or leaf in the digged earth, and would thereby encreaſe or propagate it, he will never ſee any ſucceſs of his labour; for the ſtalks and leaves would rot and ſo no new Herb would again bud out from them as is wont to be out of the Seed and Roots.

Even on this wiſe is it with Salt Peter, which if it be mixed with common Salt it would not verily produce any encreaſe, as 'tis wont to do out of its Seed and Root, as we have already laid open.

Such likewiſe is the nature of Metals, touching the propagation and encreaſe of which their proper ſeeds and roots are requiſite. What I pray are thoſe Tinctures, (one onely particle of which and that no bigger than a Pea, being caſt on an whole pound of Tin or Lead, tranſmuteth that ſame Metal into pure good Gold, and changeth and augmenteth it ſelf (as being the true ſeed of Metals) a thouſand fold, out of ſo groſs and earthly a body into ſo noble and ſo golden a nature in ſo ſhort a ſpace of time,) what (I ſay) are thoſe Tinctures, but the very ſeeds of Metals, and the very metallick roots. But by what means they are to be obtained, and to be brought under a Man's power, for my part I do not know. But yet I could not but deliver my ſimple opinion and conceptions concerning this thing, to the ſtudious of Art.

'Tis certain that all Metals have their riſe out of one and the ſame Seed, but that they differ ſo very much amongſt themſelves, and that one becomes more ripe than another, is to be imputed to the diverſity of accidents. In one and the ſame Tree are produced Bloſſoms, and ſmall Fruits of an unpleaſant taſt; then afterwards bitter and immature ones, and at length ripe and ſweet ones, and are not alike either in form, odour, or ſavour, nor are they of like effects, and yet do they all ariſe out of one beginning, *viz.* out of their Seed and Root. So is it even with Metals.

For as touching their Seed I do verily believe, that if from the moſt ſoft and as yet moſt immature Metals, ſuch as *Zink*, Lead, Tin, Antimony, Biſmute, Cobolt, *&c.* their ſtinking combuſtible and ſuperfluous Sulphur, could by ſome Bath or other be ſo taken away, as that nothing may remain ſave onely a moſt pure Mercury, that then I ſay ſuch a Mercury, or ſuch a Seed of Metals may be eaſily tranſmuted by pure Gold, as being the moſt pure Root of Metals into a true Tincture.

But to turn common Salt into Salt Peter, the operation is thus.

Take one part of black or of any other common Salt, and mix it with two or three parts of *Calx-vive* being reduced into Powder by lying in the Air, and lay it in ſuch a place as lies open to the Air and Sun-beams, but yet keeps off the Rain, as we have taught in the Appendix.

Moiſten this heap with the aboveſaid *Lixivium* of Salt Peter, and being dried, repeat the moiſtening and drying ſo long, untill the ferment ſhall have converted all the common Salt and turned it into inflamable Salt Peter, the which doth either ſooner or later happen, according as the operation hath been the more diligently or negligently handled. All being turned into Salt Peter, let an extraction be made with common Water, as the uſual cuſtom is, and lay the Reliques in the aforeſaid place, and again moiſten them with the ſaid *Lixivium* as afore, or in defect thereof ſprinkle them with common Water, ſtill moiſtening them after each drying, untill there be a new encreaſe of Salt Peter begotten, the which you are to waſh off with common Water. And ſo this operation proceeds, or holds on even to infinity.

XXIV. *Another far more compendious way of converting common Salt, by the help of fixt Salt Peter into excellent Salt Peter.*

MIX ſome certain weight of common Salt diſſolved *per ſe* in common Water, and as much of fixt Salt Peter likewiſe diſſolved in common Water, mix them in a wooden Veſſel; in which Veſſel the fixt Salt Peter being as it were a ferment will ſeize upon the common Salt, and turn it by fermentation into excellent Salt Peter.

He that deſires a more mature Salt Peter may inſtead of the ſolution of common Salt, pour upon the fixt Salt Peter *Lixivium*, thoſe ſharp waters of Salt Peter, which have already been uſed about other labours, and they will ſeize upon that *Lixivium* with a more vehement operation, ſo that of both the ſolutions as well the acid and ſpiritual, as the fixt and corporeal Peter, there will be gotten in a few hours ſpace, the moſt excellent Salt Peter and ſuch as cannot be by any other way whatſoever purchaſed.

N. B. If any one has a mind of getting a greater quantity of Salt Peter, he may firſt diſſolve his common Salt in the ſharp Water of Salt Peter, and [mix it] in that ſelf ſame *Lixivium*, [*viz.* of Peter,] and after the mixing of theſe two contrary ſolutions evaporate the common Water, that the Salt Peter may ſhoot into Cryſtals, of which there will indeed be a greater quantity, but then it will not be ſo good as that which was made by the firſt operation.

XXV. *Another gainfull way of making good and burning Salt Peter out of common Salt, by the help of fixt Salt Peter.*

COmmix equal parts of the *Scoria*'s of fixt Salt Peter that you have uſed, and of the common

Kitchin Salt together, and add thereunto twice as much *Calx-vive* firſt reduced into Powder by lying in the Air, [as they both weigh.] Of this mixture make up round Balls, and ſo pile or ſtow them with Wood, that it may be a *Stratum Superſtratum*, [or a Bed of each orderly,] as the Chymiſts call it. Kindle your pile of Wood and let all your Balls be red hot for an hour: And the fixt Salt Peter will by a wonderfull inverſon tranſmute the nature of the common Salt, and turn it into Salt Peter, but yet not inflamable till the Salts have been moiſtned ſome due time, and ſo attracted a life out of the Air, and made fit to conceive a flame, or to burn.

N. B. If inſtead of Rain-water you uſe ſuch Waters as you have already uſed and extracted your Minerals withall, to moiſten your maſs with, then will you thence get in ſome few Weeks ſpace, an inflamable Salt Peter.

But foraſmuch as in the extraction of Minerals and ſeparation of Metals, there will be ſuch a great quantity of ſharp nitrous Waters, and likewiſe of fixt Salt Peter offer themſelves for the accompliſhment of this operation, and ſo great a benefit and gain is gotten by that ſo plentifull an augmentation of your Salt Peter (which hath already ſufficiently profitably paid your coſts) out of vile and common Salt; hence clearly follows, that all thoſe hitherto deſcribed labours and operations are effected, in a manner without any coſts or expences, which is indeed an unheard of thing, but yet moſt true, and exceeds the belief of ignorant Men.

XXVI. *The reduction of Silver extracted out of the Minerals, and freed from the* Aq. Fortis *by abſtraction, [or drawing off the ſaid* Aq. Fortis.*]*

THE Silver from which *Aq. Fortis* has been drawn by Diſtillation, needs not any matter to help on fuſibility, for as much as it doth of its own nature admit of a very eaſie Flux; but that the Fugitive Spirits that adhere unto it would carry away ſomewhat of the ſame. So now, to prevent this diſcommodity, you may add unto ſuch a Silver a little of the fixt Salt ſeparated out of the *Lixivium* [of fixt Peter,] the which Salt Alkaly will mortifie the acid ſpirits ſo, that they ſhall not be able to carry off any thing at all in the melting.

XXVII. *The reduction of extracted Copper.*

IF the Copper be not mixt with any other Metals, and be but little in quantity, it may be reduced ſo in Crucibles by it ſelf, but if it be in a plentifull quantity it may be done by blaſt.

But where it contains Iron or *Lapis Calaminaris*, (which two the Minerals [of Copper] do frequently abound withall) there it admits not of reduction *per ſe* without the help of other matters, becauſe of the Iron, *Zink*, or *Calaminaris*; which Minerals aſſociating themſelves with the Copper, in the melting are wont to make it brittle. But this inconveniency may be prevented the following way.

XXVIII. *The way of making Copper, which hath Iron in it malleable by reduction.*

MIX ſuch Copper as hath in it *Lapis Calaminaris* or Iron, with common Salt, and put it in a Crucible and melt it, that ſo the Salt may aſſociate or draw unto it ſelf the Iron or *Lapis Calaminaris* out of the Copper, and turn them into *Scoria*'s, leaving the Copper, which will ſettle to the bottom and go into a *Regulus*.

XXIX. *By what means Copper is to be ſeparated from the Silver, if they are both together extracted out of the Mines, and the Silver has not been precipitated out of the ſolution by the Water of Salt, but the diſſolving* Menſtruum *hath been abſtracted from them ſo conjoyned both together.*

IF the Silver be more in quantity than the Copper, then the Copper is eaſily extracted out of the other by the Water of Salt wherein a little Tartar hath been diſſolved. For Salt and Tartar do readily diſſolve Copper, and leave the Silver.

But if the Copper bear the Bell, and there be more of that than the Silver, then will it be better to precipitate the Silver firſt by the Water of Salt, out of the firſt extraction of the Minerals; and afterwards the Copper will be likewiſe freed by abſtracting the diſſolving *Menſtruum*, inſomuch that each of theſe two Metals are gotten apart.

XXX. *If the extracted Copper comprehends in it any Gold, by what means the Gold may be therefrom ſeparated.*

ALbeit if a ſolution of *Saturn* or *Lune* being poured on the diſſolved Copper, and well ſhook with the ſame ſolution will fiſh out ſome Gold, yet it gets not all unleſs it be debilitated by ſome *Lixivium*. But now the *Lixivium* being poured thereunto that ſo the ſolvent being debilitated may the eaſier let go its Gold thereby, hath with it this inconveniency, *viz.* that the ſolvent is made wholly unprofitable to be uſed about any more extractions. Nay more, there's alſo this diſcommodity, that if an error be committed by pouring on a little more *Lixivium* than is expedient, there will alſo precipitate ſome of the Copper together with the Gold.

To prevent therefore theſe inconveniencies, the ſolution of the Copper which contains in it Gold, is to be drawn off even unto drineſs, in my ſecret and by me invented diſtilling Veſſel, in which Veſſel it may eaſily and in great plenty be done; and the following *Menſtruum* which diſſolveth onely Copper and not Gold is to be poured upon the dried matter, that the Copper may be diſſolved, and the Gold (be it either much or little) may remain in the bottom undiſſolved. The diſſolved Copper may be precipitated out of the Water with a *Lixivium*, whereto is added ſome of the Liqour of Flints, and be waſht and dried, and with ſtrong Vinegar be turned into a moſt delicate Verdigreace. The Water that is thus made uſe of, if it be poured on Alkalizated Salts yields good Salt Peter.

He that does not much regard that green colour may ſeparate the diſſolvent from the Copper by Diſtillation, and again uſe the ſame for the like diſſolving of new Copper.

But now there muſt be in the Copper ſo much Gold as to quit the coſts of this labour, and to prove gainfull; otherwiſe it is better to leave the Gold with the Copper than to buy it at ſo dear a rate.

XXXI. *The*

XXXI. *The making of ſuch a* Menſtruum *as diſſolveth the Copper and drives from it ſelf, or precipitates the Gold.*

THIS diſſolvent is no other than *Aq. Fortis*, wherein a little Tartar is diſſolved. For the Tartar being an enemy to the Gold, is wont to precipitate the Gold out of the ſolutions like as common Salt doth Silver out of *Aq. Fortis*. By this way may all the Copper be eaſily ſeparated from the Gold, concerning which, more ſhall be ſpoken in its due place.

XXXII. *Another reduction of Copper that hath Gold in it, and the perfect ſeparation of the Copper from the Gold.*

ADD to ſuch Copper that hath Gold in it, ſome Silver, and melt it with ſo much *Regulus* of Antimony as is twice the weight of the ſaid Metals thus together taken. Separate the ſaid *Regulus* together with the Copper from the Silver by the addition of Salt Peter, that ſo the Silver may retain with the Gold that was in the Copper, the which is to be afterwards ſeparated if it be worth the while. Now it is not neceſſary preſently to ſeparate it, foraſmuch as it is far better many times to abſtract ſuch a Copper that has Gold therein from ſuch a Silver, that ſo the Silver may be enriched with a great quantity of Gold by ſo many abſtractions; the which abſtractions require but very little coſts beſides the charges of the Fire and Crucibles.

For all the Salt Peter uſed hereabouts, together with all the Copper and all the *Regulus* of Antimony may be thencefrom again recovered, by him who rightly knows the precipitation. Beſides, there lies hid under this operation, ſome great matter as concerning the amending of the Metals. For it is a way of arriving to the knowledge of impregnating all Silver by Copper, with Gold, and Copper it ſelf with Silver; concerning which thing there are more inſtructions to be found in other places of my Writings.

Theſe things may at preſent ſuffice, touching the reduction of the Metals extracted out of the poor Mines, and [concerning thoſe things which by reaſon of the haſty Edition of the Appendix to the fifth part of the proſperity of *Germany* were omitted therein;] the which defects the well minded Reader may from hence ſupply.

XXXIII. *A brief deſcription of the above mentioned artificial Inſtrument, by the help whereof the ſpirits neceſſary for the extraction of the Metals out of the poor Mines that contain in them Gold, Silver and Copper, are plentifully prepared, the Minerals themſelves extracted, and the diſſolving* Menſtruums, *again eaſily ſeparated from the Metals.*

THIS incomparable and by me newly found out Inſtrument, being moſt profitable and commodious for the eaſie extractions of Metals, and preparations of the diſſolving *Menſtruums*, is made of a peculiar earth, and is almoſt of the figure or likeneſs of a Bakers Oven, and is either of a bigger or leſſer ſize, according to the quantity any one has a mind to labour in; In the forepart it hath a Door, and in the end [or top] or very near it, it hath an Outlet. To the Cover ſerving inſtead of an Alembick, a great receiving Veſſel is to be fitted, fit for the reception of the outgoing ſpirits. After that the Furnace is heated, the prepared Salts being put in peculiar Pots or Crucibles made of the beſt earth are to be put with a pair of Tongs prepared for this peculiar uſe into the Inſtrument, and all the ſpirits will be drawn off with a ſpeedy Diſtillation. Now there is no danger here of breaking the Inſtruments, and the Diſtillation may be done in the ſpace of one or two hours, how great a quantity ſoever of Salt was uſed to the Diſtillation. When the Diſtillation is over, the Pots that were put into that Inſtrument or Furnace are to be again taken out with your Tongs, and preſently other Pots filled with Salts are to be put in the room of them you took out, and the ſpirits again driven out by a new Diſtillation. This labour may be kept on as long as one pleaſeth, or as long as he hath any matter to diſtill withall; becauſe the Veſſel never cools as long as the Diſtillation is continued. This Furnace therefore is moſt notably fit for the Diſtillation of a great quantity of Salts, and that by a labour which is ſo exceeding ſpeedily finiſhed.

The ſame way of Diſtillation is to be obſerved in the extraction of Minerals or Metalline Earths, the which can be far ſooner extracted and far ſpeedier this way, than by that deſcribed in the Appendix which is to be done by heating the Glaſſes.

After the ſame manner is the diſſolving *Menſtruum* it ſelf ſpeedily again abſtracted from the extracted Metals, and being thereby preſerved without any loſs is to be applied to farther uſe. This Inſtrument therefore doth ſo compendiouſly and eaſily diſpatch all thoſe ſaid labours, that (ſet aſide your Fire and Salt) the plentifull making your ſpirits, the abundant extraction of the Minerals, and the ſeparation of your *Menſtruum*'s from the extracted Metals and its preſervation, are in a manner done without any coſts.

XXXIV. *Now follows an explication of ſome ſecrets effected by the help of my* Sal. Mirabilis, *concerning which there is mention made in the ſecond part of* Miraculum Mundi.

IT is clearly evident from many places of my Writings, and principally in the ſecond part of *Miraculum Mundi* that my *Sal. Mirabilis* is diverſly prepared; hence it follows of courſe, that the uſe thereof is different. For it hath one uſe when (after the ſpirit is thencefrom diſtilled) it is taken out of the Cucurbit, and hath as yet a corroſive nature. Contrarily, it hath another kind of uſe when this corroſive Salt is diſſolved in common Water, and filtred, and ſet in the cold, that ſo the beſt part thereof may ſhoot into long Cryſtals, which having no corroſive power, ſerve for a peculiar uſe. It hath likewiſe another uſe when it is deprived of all corroſivity and turned into a ſweetneſs, as I have ſhown in many places of my Writings. This is to be known by ſuch as would uſe it, for this or that labour, that ſo they may commit no error, but be thereby rendred Maſters of their deſires the more eaſily.

We will therefore make inſpection into ſome of thoſe principal ſecrets which are declared in the ſecond part of *Miraculum Mundi*, and examine whether or no they can be effected after the ſame manner I preſcribed?

XXXV. *By*

XXXV. *By what means any Water, Wine, Ale, Vinegar and other liqours may be coagulated in a few hours ſpace into hard pieces like Ice, by the* Sal. Mirabilis.

FOR ſuch a coagulation of all watery and moiſt things, well edulcorated (as the Chymiſts phraſe is) *Sal. Mirabilis* is to be taken and ſuch as is ſhot into long Cryſtals, prepared of an equal weight of Salt and good Oil of Vitriol, becauſe a moſt great drineſs ariſeth from the Oil of Vitriol.

Such an excellently well prepared *Sal. Mirabilis*, and which is ſhot into long Cryſtals, is to be reduced (by calcination in the Sun) into a fine powder, that ſo it may loſe all its moiſtneſs and yet not melt. For if it melts, then it would need grinding again; one part of this calcined *Sal. Mirabilis* is able to coagulate three parts of Water, Wine, Ale, or any other liqour which it is mixed withall, into a dry matter like to Ice, inſomuch that it may be carried in a Sack or a Sieve full of holes.

But what uſe ſuch a coagulation may ſerve for, would be too tedious to declare in this place. Any one will find what uſe is to be thereof made, if he well meditates upon the thing.

XXXVI. *The ſeparation of the Water, Wine, or Ale, from the* Sal. Mirabilis.

THE coagulated liquors may be commodiouſly ſeparated from the *Sal. Mirabilis* by Diſtillation; but the aquoſity of the coagulated Wine and Ale are to be ſeparated onely by Diſtillation, and the groſſer part remains behind in the Cucurbit with the Salt. But the *Sal. Mirabilis* is by calcination, again freed from all impurity, and again made white and fit for any other ſuch like new effect.

N. B. I doubt not but that there are other ways of coagulating watery liqours into Ice, concerning which we ſhall ſay ſomewhat in their due place.

XXXVII. *How the ſharp ſpirits of Salts, as* Aq. Fortis, Aq. Regis, *Spirit of Salt, Spirit of Vitriol, of Allum, and the like may be coagulated into hard Salts, not unlike to frozen Water.*

THIS coagulation of ſharp Spirits out of Salts, is done the ſame way as the coagulation of common Water, and other ſweet liqours is performed by; but the ſeparation ought to be done in Veſſels of the beſt Earth, or in Glaſs, becauſe of their ſharpneſs. And certain it is, that with theſe coagulated Spirits of Salts many things of great moment may be done, the mentioning whereof we for brevity ſake do here paſs over.

For I have purpoſed to demonſtrate at this time, ſome ſecrets onely which are mentioned in the ſecond part of *Miraculum Mundi*, and to aſſert the truth of them.

By theſe two deſcribed coagulations any one may eaſily learn that the coagulation of other moiſt things are poſſible to be done.

XXXVIII. *How the head of a fountain may be ſtopped up by this* Sal. Mirabilis.

IT ſometimes happens that there breaks out a Spring of Waters in ſome places where it proves offenſive and hurtfull. And foraſmuch as they are ſometimes very difficult to be ſtopt up, I will ſet down a way in this place of ſtopping it by *Sal. Mirabilis*, but chiefly to this end, that the nature and property of things may be throughly learned, and beſides, that even Arts and Sciences themſelves do ſometime bring no ſmall help, eſpecially when no counſel avails. Take therefore of your *Sal. Mirabilis*, heated red hot as much as is ſufficient, wrap it up in a linnen cloth and thruſt it into the hole of the Fountain, and it will be turned with the Water into an hard Stone, and thereby enforceth the Fountain to ſeek it ſelf ſome other paſſage.

XXXIX. *The way of ſeparating the Phlegm from ſubtile Spirits.*

BEcauſe the Volatile and ſulphureous Spirits of Salts are of great efficacy in Medicine, and principally when their Phlegm or aqueous humidities are removed from them, the which thing every one can't bring to paſs, I have therefore judged it worth while, even for the ſake of the Sick, to diſcover an eaſie way of ſo doing, by my *Sal. Mirabilis* as follows.

Fill a Glaſs Cucurbit half full with *Sal. Mirabilis*, pour thereupon the Volatile Spirit of Vitriol, Niter, or common Salt, and diſtill thence by B. the moſt ſubtile Spirit, the which will come off, and leave the unprofitable Phlegm behind with the *Sal. Mirabilis*, the which (by heating red hot) you may again render fit for new operations.

XL. *Another and eaſier way, yea even almoſt an incredible and miraculous one of freeing Wine, Ale, Vinegar, Brandy, and all other moiſt liquors from their unprofitable Phlegm in a moment of time, by my* Sal. Mirabilis.

THE precedent coagulation of moiſt liquors ariſeth from that moſt great drineſs which lies hid in the *Sal. Mirabilis*. But this way we now deliver, proceedeth from the con-centrated cold of moiſt Fires, which Fires we have treated of in the firſt Century, and 'tis thus.

Take one pound of the aboveſaid *Sal. Mirabilis*, put it in a ſtrong Glaſs, and pour thereupon two parts or pounds of the con-centrated and cold Fire of ſome Salts, whether it be of Vitrol, or common Salt, or Salt Peter, whoſe Fire excells the Fires of other Salts; and let them lie quiet for ſome hours, and there will be made an Icy maſs of them both, the which you ſhall in the Winter time ſet out in the Snow or in ſome cold place which by how much the colder ſo much the better; where the longer it abides in the cold, the more will the cold Fire be con-centrated, and conſequently ſo much the greater matters may by ſuch a con-centrated body be effected.

XLI. *The receiving or catching the breath of Men, as they ſit in ſome warm Stove, and the changing it into the form of Ice.*

IF thou haſt a mind to create a kind of admiration amongſt thy Gueſts or Friends when they are with thee, and to give them ſome profitable recreation, you may accompliſh your deſire the following way.

Carry with thee a Glaſs full of the moiſt Fire of Salt, and which is coagulated by the *Sal. Mirabilis*, and hath ſtood ſome hours in the cold, into the warm Stove, and hang it up over the Table by a thread

thread or ſmall line, when your Gueſts are ſet at the Table, and when they ask you what this ſignifies, you may tell them that you will for their Recreations ſake, ſhew them ſome pleaſant diverſion; after they have made an end of eating and drinking. Upon this they will all of them have a deſire to ſee thoſe tricks and ever now and then caſt up their eyes upon the Glaſs. But after that the Glaſs has there hang'd a minute or half minutes ſpace, the breath of the Men that ſit about it will preſently apply it ſelf to the Glaſs, and ſtick on to the outſide thereof like Snow, and cover it all over; and thicken more and more, inſomuch that in a ſhort time it will have a thick and hoary beard, all about conſiſting of natural Ice; and will ſo long keep on its encreaſing as the con centrated cold laſts in the Glaſs. Then at length the Glaſs growing a little hot, after the internal cold of the con-centrated Fire is conſumed, that Icy beard begins again to melt and being reſolved, to diſtill into a Water, for the receiving of which diſtilling drops ſome Veſſel is to be ſet under. This is a wonderfull Diſtillation of Men's breath, which coming out of their mouths in their diſcourſing, is reduced by the con centrated Fire of Salt into Ice, and at length, again into Water by the heat of the Stove.

This ſo ſpeedy an operation or tranſmutation of a moiſt and watery vapour into natural Ice, ſeems indeed at the outſide view to be but a vile and unprofitable thing; but if it be but well minded by the ſight of the internal mind, it not onely begets a moſt great admiration, but withall opens the moſt excellent knowledge of natural things.

Such as greedily hunger after Gold will ſay, what benefit comes from theſe tricks? had Gold but diſtilled from the Glaſs we would have ſaved it, what need we any Water? or if it had been noble or generous Wine, we could have prized ſuch an ingenious knack, and drunk it off. Take away that filthy Water and bring us the gallant Wine. Such diſcourſe as this, let one of thy Friends purpoſely utter, being thereto firſt ſuborned by thee, that ſo thou maiſt the more delight the reſt of thy Friends that are ignorant of theſe things, by thy preſently ſatisfying him that is ſo deſirous of Wine, ſaying, that if thy Friends and Gueſts do deſire better Wine, thou art ready to draw it them. Upon this, thy Gueſts will diligently liſten and deſire to ſee what better Wine thou wilt draw them out of thy Celler. The chiefeſt of theſe will well know that thou haſt not in thy Cellar ſuch variety of Wines.

In the mean while, have ready ſome ſmall Glaſſes which contain ſome Ounces, filled with the concentrated Fires of Salts, and well ſhut and ſtrings tied ready unto them; now when thou haſt a mind to give them a reliſh of thy Art of bettering Wines, and rendring them more generous, command a Cann of common Wine to be brought thee, and give it to thy Gueſts to drink But now when they ſhall perceive that it is the ſame ſort of Wine they had formerly, and that thou haſt not given them any better, thou ſhalt ſatisfie them by the following way.

XLII. *A momentary operation of rendring any common Wine more generous, and exceedingly bettered by the cold Fires of Salts; and that in the preſence of many Men.*

COmmand one of thoſe Glaſſes prepared for this purpoſe to be brought unto thee, and let it down by the thread into the Glaſs full of Wine, which being done, the con-centrated cold that lies in thy little Glaſs, which thou hang'ſt in the greater one of Wine will draw to it ſelf the watery and unprofitable parts of the Wine, and change it into an incipid Ice. And by how much the longer you leave that little Glaſs in your Wine, ſo much the more Water will be drawn there out of, and the Wine will be made the more generous thereby. But the ſooner you take it out, the leſs Water will be ſeparated; ſo that out of one Cann of Wine you may by this means give your Gueſts ſeveral ſorts of Wine to drink, or rather may let them better the Wine themſelves even according to their pleaſure. For by this operation the unprofitable Water being drawn out of the Wine and turned into Ice, is ſeparated and taken away; part therefore of the Water being taken away, the remainder muſt neceſſarily be much more efficacious and more ſweet than it was afore, when it had Water conjoyned as yet with it.

A Maſter of a Family uſing this Artifice may make for himſelf and his Gueſts, divers Wines though drawn out of one Barrel.

Now ſuch a ſecret is not onely full of Curioſity, but alſo of profit, and may prove helpfull and do much good ſeveral ways. I could if need required declare a thouſand conveniencies, and Commodities proceeding therefrom. But becauſe I judge it needleſs to ſpend time in declaring them, I will at preſent mention onely ſome few, remitting the reſt to the following Centuries, in which ſhall be made mention of them according as the [matter and] time requires or permits.

XLIII. *The amending of any midling or ſmalliſh Ale in the Winter Seaſon, as well at Home as Abroad.*

IT ſometimes happens that a Maſter of a Family hath but onely one ſort of Wine or of Ale in his Cellar, the which he is accuſtomed to drink, and puts not in his Cellar any better Wine or Ale either by reaſon of poverty, or elſe becauſe the Cellar lies open to every body, both Men-ſervants and Maid-ſervants, and they will to the beſt Tap, and ſo he fears it will be too chargeable.

But foraſmuch as old Men's Stomachs, when they ſometimes feed on Stock-fiſh dried, or on Martelmas Beef, or Fiſh, by reaſon of its debility through old Age, cannot perform its office of Concoction: The Ale or Wine may by the help of this ſecret be preſently rendred ſtronger, eſpecially in the Winter Seaſon, in which Seaſon a warmer and ſtronger draught of Ale and Wine is more beneficial than in the former months, and then they can better brook the want of the ſame. But ſome may object and ſay, where ſhall I get ſuch a concentrated cold as may enable me to extract the Water out of the Wine? hereunto I anſwer that there will be many that will prepare it for time to come and will ſpare it to others; and yet no body needs ſo great a quantity thereof neither. If a Maſter of a Family hath but one onely half pound of the ſame, he may uſe it his whole life time, if he but keep it ſo as that the Glaſs break not and ſpill it. For when he hath taken away the Water of one or two Pots of Ale or Wine, let him remove the Ice from the Glaſs, and ſet it again in the cold till he needs it. For ſuch a cold concentrating Magnet always keeps its virtues, and is never corrupted, but always fit for the effecting of many wonderfull things.

N. B. If you have not thoſe fires of Salts the heavy Oil of Vitriol, Oil of Salt, or *Aq. Fortis* may be uſed hereabout; but yet theſe Oils do not in any compariſon perform what thoſe concentrated Fires of Salts are able to effect. But however they demonſtrate the thing it ſelf though they bring no great ſtore of profit, and this any one may eaſily underſtand.

For there is a great difference betwixt the watery and not watery Fires of Salts, any common and ſimply bare Water cannot become ſo cold as the Water of any Salt, and this Salt-water cannot be ſo cold as a common Spirit of Salt, nor can this Spirit by any means arrive to that degree of cold as a concentrated Spirit uſually attains to. So a skin of Leather is never ſo cold as Wood, nor Wood as a Stone, nor a Stone as an heavy Metal; the difference proceeding from the thickneſs of the compaction, for verily any thing will concentrate the more cold or heat and fix it with it ſelf, by how much the compacter and thicker body it ſhall be of. For it is the property of a concentrated cold to kill a thing and to make it hard and ſtiff. Contrarywiſe a concentrated heat gives a ſpeedy life, and correction, and emendation, and this experience it ſelf teacheth.

O happy Man is he that can make a Metalline Salt as compact and thick, and heavy as a Metal, and can by conſerving it a due time in the heat of the Fire, that the heat may by little and little and gradually be concentrated and fixed therein, make it fuſile. Without doubt ſuch an one would get a Tincture that would cure the moſt grievous Diſeaſes, and change the imperfect Metals into perfect. For it is the Fire onely that begets a maturity to any thing, and by how much the ſtronger and greater the Fire is ſo much the ſpeedier and better amending of any thing may be expected.

Theſe things which I have here briefly declared are of greater moment, dignity, and weight than any one can believe; and beſides there's no doubt but that there will ſhortly ſome ſtep forth, who will without any fear teſtifie the verity of Art, by changing imperfect Metals and turning them into pure Gold; ſo common will Alchymy become in this Age, which was neither heard of nor ſeen before in this World. Nay more, Men will make this Art ſo familiar unto them that they will not much eſteem even of particular Tinctures.

But why God permits ſuch things to be done, is to us wholly unknown, thus much we ſee onely, that doubtleſs there will follow ſome great change in the World; happy ſhall they be who having the fear of God before their eyes, and are of a pure mind, cannot be hurt by the Devil nor Sin his Mother.

XLIV. *Wherein this ſecret is beneficial to thoſe that travel in the Winter Seaſon.*

NEceſſity doth ſometimes enforce old Men to undertake a Journey in the Winter, which, if no urgent haſt forceth, may be ſo ordered that at Noon and Night quiet reſt may be always taken in ſuch a place in which is plenty of Meat and Drink.

But if ſo be that an urgency of occaſion requires a going on forward, whether one ride on Horſeback, or in a Coach or Waggon, and that either the Snow render the way difficult, or ſome Wheel of the Waggon be by chance broken, and ſo the journying Perſon hindred from coming to the place aimed at in the appointed time, he is ſometimes by this means conſtrained to turn aſide to a poor Peaſants lodging, or if his fortune be a little more favourable, he is neſſitated to Inn in ſome poor Village, where he can neither meet with Wine or good Ale; he now that thus journieth may out of the poor Wine or Ale make himſelf better Wine or Ale, and the better provide for his health if he hath about him, ſuch a magnet in ſome ſmall Glaſs that attracteth Ice to it.

XLV. *What profit thoſe that ſail in the Sea may have by this ſecret.*

IT may ſo happen that a Man taking Ship with hopes of arriving in a ſhort ſpace of time to the end of his Voyage, though he has ſome little of good Wine or Ale, may be enforced if the Wind prove contrary to ſtay longer upon the Sea; his good Wine therefore and his Ale being ſpent, he may make that ſmall Beer in the Ship which the common Marriners drink of, better, and preſerve his own health.

XLVI. *How by the help of this ſecret the unprofitable Phlegm of Brandy made of Corn may be taken away, that ſo it may become equal to the ſpirit that is made of the lees of Wine.*

TO the effecting of this buſineſs there is required a greater Magnet, which may remove that Phlegm then needed to the Wine or Ale, becauſe Brandy is of an hotter nature than Wine or Ale, which do more willingly let go their waterineſs than aduſt Wine is wont to do.

XLVII. *By what means the ſuperfluous wateriſhneſs is to be taken away from the weaker or wateriſher Vinegar, that ſo it may be made ſtronger.*

THE wateriſhneſs of the weaker or more aqueous ſort of Vinegar doth ſuffer it ſelf to be more eaſily extracted by the help of that Ice-attracting Magnet, and the rather becauſe it, *viz.* the Vinegar puts on an Icy form much ſooner than any other Drinks.

XLVIII. *It may be quæried, whether or no this bettering of Wine, Ale, Vinegar, Brandy, and other Drinks, and rendring them ſtronger and ſweeter, may be done in great plenty, or whether it is to be accounted of as a curioſity onely?*

FOR anſwer, verily it is a moſt excellent ſecret moſt aptly ſatisfying the curious inquiry of mortal Men, which the World as yet never knew, and yet it can effect ſuch unheard of things, which it is not neceſſary that they ſhould be divulged.

As touching the plentifull ſeparation of Water from Wine, Ale, or other Drinks [in great quantity] the ſame may be done and that with profit, and in ſome places bring no ſmall gain to him who knows how rightly and artificially to accompliſh the ſame. I have done enough as to my affairs in laying it open; we muſt not boil meat for the ſlothfull and thruſt it into their mouths. Let them get it themſelves if they will, and rightly take care of their own matters.

XLIX. *Whe-*

XLIX. *Whether or no likewiſe a great quantity of cold Fires out of Salts may be eaſily prepared.*

FOR anſwer, yes, ſo great a quantity of them may be prepared as a Man would wiſh for, or as his neceſſity ſhall enforce him to deſire. But becauſe ſuch cold Fires of Salts are the effecters of admirable and incredible things which the World never knew of, therefore the copious preparing and getting of them deſerves to be concealed. Let therefore every one be content with thoſe things which I have publiſhed in the firſt Century: haply in proceſs of time more may follow.

L. *How my* Sal Mirabilis *can free watery Oils of their ſuperfluous humidity.*

MIX one pound of this my *Sal Mirabilis* reduced by warmth into a fine Powder, with ten or twenty pounds of good Oil Olive, or new Linſeed Oil; the *Sal Mirabilis* is to be commixt warm with the Oil, and being well ſtirred about with it, draws to it ſelf all the Water, and ſettles to the bottom of the Veſſel, from which the clear Oil is to be ſeparated by pouring it off; and all the Water and impurity of the Oil is to be ſevered from the *Sal Mirabilis*, that ſo it may be recovered and be again profitable for ſuch like operations.

LI. *The way of taking off the muſtineſs or ſtink from a Veſſel corrupted or grown muſty by lying, that it may be again fit to put more Wine into.*

SMear over the inſide hollowneſs of ſuch a Veſſel with the concentrated moiſt Fire of Salt, that it may be every where wetted, and ſprinkle thereupon ſo much of the *Sal Mirabilis* as will ſtick thereunto. For ſo that cold Fire of concentrated Salt, with the attracted *Sal Mirabilis* will become hard and not run, and ſtick on to the Veſſel; and that ſaid Fire will in a few days ſpace burn up all the mouldineſs and ſtinch, juſt as if the common Fire of Wood had been uſed thereabouts. The Veſſel being waſhed with boiling Water is again rendred fit and convenient to put Wine into.

This operation is not here taught for ſome ſtinking Veſſels ſake that is not worth the while, but to this end, that other ſecrets of greater moment, and which are profitable, may be learned thereby and known. For under theſe operations lie hidden many wonderfull things, and ſuch as the greateſt part of the Readers will not conſider. But to what end is it to light up a Torch before ſuch Men, that are left by God in blindneſs and darkneſs, and hath not vouchſafed to beſtow on them any Eyes.

LII. *The manner of preſerving all kinds of Fruits, Eggs, Onions, and other moiſt Fruits of the ground a long time from corrupting.*

THE ſweet or dulcified *Sal Mirabilis* is to be well dried by the help of the Fire, and being put in ſome Veſſel with Fruits, Eggs or ſuch like, with a thick and cloſe laying [or bed of one upon the other] doth by its drineſs ſo preſerve all things, and by its attracting virtue of all corrupting humidity, that for a long time they feel not the leaſt corruption.

LIII. *Queſtion. Why doth the* Sal Mirabilis, *which Corn has been macerated withall afore its ſowing, and ſome whereof is mixed with the Earth, [or ſown] attract the Rain, coagulate it, and hold it with it ſelf longer than other Salts?*

FOR anſwer, this is to be imputed to its moſt great drineſs which it abounds withall.

LIV. *The preparation of the* Sal Mirabilis, *ſo as that it may become an univerſal Medicine for all Vegetables.*

THE *Sal Mirabilis* as it is of it ſelf, is by reaſon of its corroding virtues which it as yet retains plainly unfit for the multiplication of the Vegetables, for that being ſo uſed would prove more hurtfull than profitable. Upon this account it is neceſſary that to one part of it be added two parts by weight, of the beſt *Calx-vive*, which being moiſtened with Water and made up into Balls, are to be well heated red hot for an hour, that ſo all the corroſivity being introverted the *Sal Mirabilis* may be Alkalizated, and uſed to the Vegetables for an univerſal Medicine; for it conſerves its attracting force, and loſeth it not in the heating red hot.

LV. *What's the reaſon that Wood lying long in the Water wherein* Sal Mirabilis *is diſſolved, is turned into an hard Stone?*

FOR anſwer, this operation is to be aſcribed to the incredible aſtringent property and nature, that the *Sal Mirabilis* is endued withall.

LVI. *To reduce an half dead Tree to life again by the help of* Sal Mirabilis, *that it may revive and begin again to ſprout out.*

MIX with the digged up Earth, with which the Roots of the Trees are covered, one, two, three or more pounds of the *Sal Mirabilis*, according to the bigneſs or littleneſs of the Tree, and again, cover over the Roots with the ſame, and pour upon the Earth it ſelf, ſome Rain-water, that being thereby moiſtned, the Roots may the better partake of the Salt that is mixed with it.

By this means, the Tree will attract to it ſelf the Medicine or good nutriment out of the Salt, and will be cheriſhed and refreſhed juſt as a piece of bread or other food being given to an hunger-ſtarv'd Man reſtores him his ſtrength again.

LVIII. *How by the help of* Sal Mirabilis *moſt hard and inſoluble ſubjects may be very eaſily diſſolved.*

LET the nature and property of a Char-coal of Wood be conſidered, the which is ſuch, as that if it be kept in the greateſt Fire for many years, and all external air kept out from it; it will neither ever melt, nor ever loſe ought of its body, but will come out again in the very ſame form as it had at your putting it into the Fire.

So likewiſe a Wood-coal is able to endure an hundred, yea a thouſand years in the Earth, Water, or even the moſt ſharp corroſive Waters unhurt. This ſo moſt ſharp a tryal, neither Gold nor Silver though they be the pureſt and moſt conſtant are able to undergo. And although a Coal be thus durable, yet nevertheleſs will I diſſolve it in half an hours ſpace, and

and convert it into a red fuſile Salt, which is diſſolvable with Water, and yields a wonderfull liquor which is the effecter of incredible operations both in Medicine and in Alchymy.

LIX. *What* Sal Mirabilis *is to be uſed to diſſolve the Coles.*

THE *Sal Mirabilis* is diverſly prepared, as appears in the ſecond part of *Miraculum Mundi*; but what way ſoever it be prepared by, it may be commodiouſly applied to the ſolution of Char-coals, nor needeth it any farther preparation, but even juſt ſo as it is taken out of the Cucurbit and is as yet corroſive is to be uſed to diſſolve all things.

LX. *The manner of reducing any Char-coal in half an hours ſpace to its firſt matter, that is, into a ſulphureous Salt, by the* Sal Mirabilis.

MELT two or three ounces of *Sal Mirabilis* in ſome Pot or Crucible, and throw in a peice of Wood-coal or Char-coal, and cover the Pot with its Cover, and let it flow for one half hour, that ſo the Salt may diſſolve as much of that Coal as it can, and may leave the reſt of it which it cannot diſſolve, undiſſolved. Then pour out your matter and you ſhall find a red Stone of Salt, which being taſted upon the Tongue burns it like Fire, as all Alkaly Salts do. For the corroſive force is inverted by the Vegetable Sulphur, and changed into an Alkaly.

This red Carbuncle being diſſolved in Water yields a green Solution, which being filtred, and let ſtand ſtill for ſome hours, appears of a white colour, and being let alone quiet longer, acquireth a yellow colour. One drop thereof gilds over an imperial as Sulphur does, if it be therein put. For the Char-coal is no other thing but a Sulphur of the ſame nature as the Mineral Sulphur is of, and penetrating all the Metals, ſuffers it ſelf to be fixed with them, and doth after another manner perform all thoſe things that the Mineral Sulphur is wont to do.

The very well skilled *Sendivow* in his Dialogue concerning the Sulphur of the Wiſe Men, ſaith he is ſtrongly guarded, and ſits Captive in a dark Priſon, and is not eaſily freed; but Salt gives him a deadly wound.

A Sulphur therefore ſits in this black Coal in a dark and obſcure Priſon, ſhut up with ſtrong Bands, and is a Captive, nor can any one free him from thoſe Bands but onely Salt. But being once releaſed out of Priſon, he is wont to come in view, and not before.

Thus now have we brought forth Sulphur out of his obſcure Body. And now will we alſo bring him forth to publick view.

LXI. *How the Vegetable Sulphur is to be made viſible.*

IF you pour into the white Solution of the Coals ſome Acidity, as Vinegar, Spirt of Salt, of Vitriol, or ſome *Aq. Fortis*, and that leiſurely and by little and little as much as is requiſite for the killing of the *Sal Alkaly*; the Sulphur will ſettle to the bottom like a white Powder, which being ſeparated from the Salts, and waſht with fair Water, and dried, will burn and exactly anſwer to the virtues of the Mineral Sulphur.

LXII. *Another way demonſtrating that a Mineral Sulphur lies hidden in all Vegetables.*

PUT this green or white juice of the Wood or Coals expreſſed or ſqueezed out by the Salt, in a Glaſs Cucurbit upon ſome *Sal. Armoniack* powdered, put on an Alembick and draw off all the moiſture by Diſtillation, in which Diſtillation the ſpirit of the *Sal. Armoniack* will bring over the Helm, the Vegetable Sulphur of a golden colour. It is a moſt penetrative Spirit and of wonderfull efficacy in Alchymy and Medicine, and this will eaſily be credited by him, who knows its penetrating and graduating virtue and property, in which it excels all other penetrative Spirits, you muſt keep it very warily becauſe it eaſily vaniſheth.

LXIII. *There is yet another way of making the ſame Sulphur of Coals viſible.*

WHEN you have poured out our Carbuncle out of your melting Pot, beat it into Powder and mix therewith half its weight of *Sal. Armoniack* powdered, draw off by a Glaſs Retort, both matters exactly commixt by Diſtillation, that the *Sal Armoniack* may bring over with it that Sulphur. Waſh off this red matter drawn out by Sublimation, with common Water, the which being freed from the *Sal. Armoniack*, is a Sulphur inclining from its reddiſhneſs to a yellow colour, and is altogether like to the Mineral Sulphur.

LXIV. *There is likewiſe another way of extracting the ſame Sulphur out of Coals.*

FIrſt of all, exactly melt the Coals by the *Sal Mirabilis* in a melting Pot, that the Salt may be accurately Alkalizated by the Coals, and burn the Tongue like Fire. Then pour it forth and beat the Coals into Powder and put them in a Glaſs, and pour upon them Spirit of Wine freed from all its Phlegm. Then ſet the Glaſs in warm Sand and ever and anon take it out and ſhake it well that the Spirit of Wine may extract the Sulphur, and leave the Salt untoucht. Your Spirit being as red as bloud, pour it out into another Glaſs, and again, pour on more Spirit of Wine upon the matter, and repeat the former operation; theſe pourings on, and cantings off are to be ſo often repeated, till the Spirit of Wine when poured on will extract no more. Put all theſe red extractions into a Glaſs Cucurbit, and ſeparate the Spirit of Wine by a B. and it will leave behind in the Cucurbit a ſweet Oil of the colour of bloud; a Medicine of ſo great moment in all Chronical Diſeaſes, as that none is to be preferred afore it. For this Sulphur is far better than the Mineral Sulphur, which for the moſt part is mixt with ſome Arſenical property, whereas this is extracted out of the Coals of Wood, and is therefore far purer and neceſſarily more conducive to Man's health.

And as touching the whole operation of this precious balſamical Sulphur, which is but little inferiour to potable Gold, the chief knack of duely making it conſiſteth in this, *viz.* that the *Sal Mirabilis* be well and accurately Alkalizated by the Coals. For if not, the Spirit of Wine would diſſolve the *Sal Mirabilis*, and would not extract the Sulphur, nor would it anſwer thy wiſhes, if it be not deprived or deſpoiled of all its humidity.

He

He that ſhall be well skilled in the due handling of this Operation, will obtain a moſt excellent Medicine not much inferiour to potable Gold, of a ſweet and pleaſant Taſt, and of an admirably gratefull Odour and Colour. By ſuch a means as this, is extracted out of a dead Herb, or dead Wood, its greenneſs in the firſt Solution made by Water; and after the Extraction with Spirit of Wine, the moſt delicate red Colour thereof, with a moſt ſweet vegetable Odour; all which lay hidden in the black Coal, and are again brought forth to light.

The uſe of this moſt delicate Oil of Sulphur is not ſmall both as to the metalline Operations and other Arts; and this ſo ſpeedy a putrefaction and revivification of the dead Vegetables into a living medicine carries in its Intrails a great myſtery.

LXV. *It may be demanded, whether or no the Coles themſelves are to be onely made uſe of for this revivification of the dead Vegetables, and not the green or dry Wood they are made of, and the Herbs too, may alſo be thus dealt with.*

FOR anſwer, even the Herb it ſelf, or the unburnt Wood it ſelf may be changed in a Crucible into a red Stone by the *Sal Mirabilis*. For the operation tends to the ſame end be it Herb or Wood, green or dry, or made into a Cole.

LXVI. *It may be queried, what Wood or what Herb being changed after that ſame manner by the* Sal Mirabilis, *yields the moſt excellent Medicine.*

FOR anſwer, the Woods that are weightieſt do excel all others; for they are riper and have in them a better Sulphur, than thoſe Woods or thoſe Herbs have which are lighter, and grow up in half a years time, the older the Trees are, the more fit for medicine they are; ſuch as are the Roots of Vines, Juniper, Box, Beech, Oak, Cedar, and ſuch like.

LXVII. *A Demonſtration, that out of dead Herbs and ſuch as are again reſtored to life, may new Herbs be produced without the addition of the Seed of other Herbs.*

FILL ſome Pots with ſome Fertile Earth or Clay, void of all Herbs or Seeds, and moiſten it with the green or white Juice of the Coals. If now you expoſe theſe to the Sun and Rain, there will ſpring up thencefrom divers new and unknown Herbs.

LXVIII. *How by the help of* Sal Mirabilis, *Metals are to be diſſolved by the dry way, and to be converted into moſt excellent Medicaments, and firſt of Gold.*

WHEN you would make your trial of Gold take a piece of golden Money, and bow it, and add thereunto ſo much *Sal Mirabilis* as may be 5, 6, or 8 times the weight of the Gold. Melt it in a Wind Furnace, and pour it out into a Veſſel fit for to receive molten Metals; and you ſhall find your Salt to be of a purple Colour. If all the Gold ſhould not be diſſolved but ſome part thereof ſhould ſettle to the bottom, ſeparate that *Regulus* from the purple Salt, and diſſolve your remaining Gold in a Crucible with new *Sal Mirabilis*, that ſo all the Gold being diſſolved may colour the Salt with a purple Colour. With this purple Salt may be performed many very profitable things, which appertain not to this place. 'Mongſt which thoſe are chiefeſt which reſpect the emendation or bettering of Metals, concerning which, I will here add onely one Operation.

LXIX. *The graduating of any Iron into Gold by this purple Salt.*

FOR the due performing of this, you are to have ſtone-like melting Pots, and the beſt that can be, ſuch as by no means may drink in the Salt, or let it run through, for that the Solution of the Gold with the Salt is otherwiſe wont to hide it ſelf in ſuch Pots as are not ſtrong enough.

If thou canſt not get ſuch, 'tis better for thee to abſtain from this labour, than to loſe thy Gold, unleſs haply thou haſt a mind to try the poſſibility of the ſame.

If therefore thou deſireſt to encreaſe the *Quinta*, [or ſmall weight] of thy Gold which thou haſt added to thy Salt, with ſome Augmentation; put two or three *Quinta*'s of Iron bits or pieces into a good Crucible, and having put thereto your purple Salt, melt it very accurately for one half hour, in which time, the Gold will precipitate it ſelf out of the Salt into the Iron, and graduate ſome of it by turning it into Gold. For whilſt the purple Salt doth eat upon the Iron and conſume it, it doth together therewithall make ſome of it participant of a golden Nature by graduation.

I do not inſert this Operation here, to the end that by the help thereof a Man ſhould think of getting Maſſes of Gold, no; for the ſole end of my propoſing it was this, that I might confirm the poſſibility of the thing by ocular Demonſtration.

Now as here the Iron is graduated by the help of the Gold or golden Ferment, into Gold; ſo likewiſe may Copper be graduated and exalted into pure Silver; by the application of a ſilvery Ferment, as followeth.

LXX. *The manner of exalting Copper into Silver.*

DIſſolve Silver in a Crucible by the *Sal Mirabilis*, made of Salt-peter and Oil of Vitriol; in which Solution you ſhall get a green Salt, fit for the graduating of Copper into Silver, after the ſame manner as we taught but now of the Gold.

And albeit the Silver augmentation be not ſo great, yet the poſſibility of the Art is thence apparent and demonſtrateth, that one Metal admits of being converted into another. But yet he that has good skill in handling this labour, will, if he be fraught with good and apt Crucibles, which can hold the *Sal Mirabilis* and not ſwallow it up, receive no ſmall benefit by this ſame Operation. The *Scoria* which are remaining in this, and the precedent Operation are not to be thrown away, but to be mixed with Litharge, that ſo being reduced by blaſt, they may graduate the Lead, and enrich it with no contemptible Portion of Gold and Silver. For great are the Vertues of this Salt in graduations, which the Ancient Philoſophers have openly enough hinted at, ſaying that their Salt augments the redneſs of the Gold and whiteneſs of the Silver, and that this is a thing moſt true, he who ſhall in a due manner perform the Operation will learn that ſo it is, by his own Experience.

But leaſt an Errour ſhould be committed and ſome of your Gold and Silver loſt, it is better that a Man exerciſe himſelf in making his Experiments in the leſſer Metals; and omit the dealing with Gold and Silver ſo long till theſe leſſer Metals make him a

ſufficiently experienced Maſter for the dealing with the greater.

LXXI. *How Iron may be exalted into Copper in the melting by the help of* Sal Mirabilis.

DIſſolve one or two whole Lots of Copper in melting it by *Sal Mirabilis*, which Solution will yield thee a Salt enclining from a green, to a black colour.

Into the ſame Pot which contains your Copper diſſolved by the *Sal Mirabilis*, put three or four Lots of bits of Iron, and adjoyn them to the Copper diſſolved in the *Sal Mirabilis*, and force it with the Fire, ſo that they may be kept in flux together for one half hours ſpace. By this means the diſſolved Copper will adhear to the Iron by precipitation and exalt ſome particles of the Iron into Copper. All being well molten, pour it out into your Cone that the Copper may ſettle in a *Regulus*. The *Sal Mirabilis* and Iron being turned into a *Scoria*, are uſefull for the inriching of Litharge, in the ſtrong melting by blaſt, with Gold and Silver.

N. B. If the Mercury of Saturn be mixed with theſe, or elſe with thoſe other *Scoria*'s which were left by the Gold and Silver and are far better, and ſo be melted together with a ſtrong Fire, the Lead will be bettered and that by an encreaſe not to be contemned, and will abundantly pay for the labour and coſts. But yet I would not put any one upon the undertaking of this work; except he be well verſed with meltings in Crucibles and without them, by the Bellows upon Hearths. For I write not theſe things for young Beginners, but onely for ſuch who well know what belongs to the Art of melting.

But yet that he may have ſome manuduction into theſe labours, I will declare the general uſe of the *Sal Mirabilis* in the emendation of Metals.

LXXII. *The univerſal uſe of* Sal Mirabilis *in the emendation of Metals.*

THough the wonderfull Salt of Art diſſolveth all Metals, and conjoyneth them in a ſpiritual manner as it were, and renders them efficacious to better each the other in the Fire, yet is there a difference to be obſerved in that thing, by him who deſires to follow the neareſt way, and to decline all diverſions, or goings about. For example.

He that has a mind to diſſolve and conjoyn the Metals, Gold, Silver, Lead, Copper, Tin, and Iron, by the *Sal Mirabilis*, that they may diſplay their virtues in operating to the perfection of each other, muſt take for the Gold, Iron, Copper, and Tin, ſuch a *Sal Mirabilis* as being prepared of common Salt doth eaſily diſſolve thoſe Metals. But now the ſame Salt uſed about Silver and Lead, would effect nothing as to their Solution, becauſe there is no familiarity or friendſhip between common Salt, and Lune, and Lead, for it is an enemy to thoſe Metals, kills them, and reduceth them to nothing.

N. B. But when thoſe Metals are by the help of Salt reduced into their Mercuries, then may it come ſo to paſs, as that they may be conjoyned with Gold, Iron, Copper, and Tin; for without a foregoing preparation, they enter not into the Salt, unleſs the *Lune* and *Saturn* be diſſolved in that *Sal Mirabilis* which is prepared of Niter, and be adjoyned to the Solution of *Mars* and *Venus*; of which Solutions the one doth very willingly embrace the other, inſomuch that one Metal doth eaſily operate upon the other, and conſequently a profitable graduation, fixation, and emendation ſucceeds.

But now if you would have your Metals, not conſtant in the Fire, but volatile and made flying, then, that *Sal Mirabilis* is to to be uſed, which is made of Salt Peter or Kitchin Salt, by the help of Sulphur.

This is the univerſal uſe of *Sal Mirabilis*, ſerving for the Solution, Graduation, Fixation, and contrariwiſe Volatiliſation, or the converſion of all Metals into a volatile nature. But the ſpecial Solutions, Fixations, or Graduations of them by the Salt of Art, require an addition of ſome Vegetable Sulphur, which being adjoyned to the Metal, yields ſome help to the *Sal Artis* in the Graduation of a baſer Metal, which help the conjunctions of Metals that be of a ſulphureous nature, do not at all need; though indeed 'tis better if you help them with ſome Vegetable Sulphur. For Sulphur and *Sal Artis* are like Male and Female, they bear a mutual love to each other, and beget a rich Off-ſpring; when they lovingly court each other in the Fire, even alone and without the addition of any Metal, and are brought unto perfection. So then, thus by theſe operations may gain and profit be divers ways, and in divers manners gotten, as well particularly, as haply alſo univerſally, (but this laſt way I am not as yet acquainted with.)

All theſe things do ſufficiently, yea abundantly ſhew one the way of arriving by the help of the Salt of Art, to the attainment of ſuch things as are of ſome moment. Enough to the wiſe.

Although that the Metals do admit of a moſt eaſie Solution by the *Sal Mirabilis* in the dry way, yet notwithſtanding, that Solution may yet more commodiouſly be perfected the following way, *viz.* thus, when the Metals are put into the Cucurbit or Retort, in the diſtilling off the Spirit. For whilſt the Spirit is driven off, out of thoſe diſtilling Veſſels, the Metal is diſſolved during the Diſtillation, and remains in the bottom with the *Sal Mirabilis*. But whatever of the Metal remains undiſſolved, is to be removed; but the golden Lunar, Venerial Salt, *&c.* is to be kept for ſuch uſes as it is neceſſary for.

N. B. If ſo be any be minded to pour on again that diſtilled Spirit, upon the Metalline Salt abiding in the bottom he may ſo do, and 'tis profitable; becauſe that Metalline Salt is by this means rendred far more commodious and apter for Tranſmutation.

But that none may err from the right way, it is neceſſary that we firſt ſhew how the Metals (out of which being bettered, Gold and Silver are to be extracted) are to be afore prepared, that ſo they may admit of being the more eaſily exalted and amended. For all things are to be done by the preſcribed method, and to be managed by [promoting them to] their appointed limit and ſcope, if any profit is thence ſought.

Lune and *Saturn* do not by any commixion aſſociate themſelves to the Meralline Salt, unleſs theſe ſame metals be firſt reduced into their Mercuries, concerning which thing we have treated at large in the third and fourth part of the proſperity of *Germany*.

LXXIII. *By what means the imperfect Metals may (by the* Sal Mirabilis*) be turned into perfect ones.*

TAKE of *Sal Mirabilis* four ounces, the filings of *Venus* half an ounce. Put this matter in a ſtrong, double,

double, and well covered Haſſiack Pot, ſet it in a wind Furnace, melt it ſtrongly for half an hour, that the *Sal Mirabilis* may rightly diſſolve the Copper and make it ſpiritual. To this Copper thus made ſpiritual, add half a part in weight of the Mercury of Saturn, and melt together both metals by a repeated melting, for an half or even an whole hour. In this conjunction and operation, the ſpiritual Copper will get to the Saturn by graduation, no ſmall bettering and fixation. For by how much the longer they are kept in flux, ſo much the greater amendment doth Saturn purchaſe. But yet no *Regulus* can thus *per ſe* ſettle to the bottom, unleſs ſome Iron be added in the melting, concerning which, no certain weight can be preſcribed. For when ſome ſmall bits onely thereof, or ſome little particles are put in the Crucible, the Salt is mortified by corroding of the Iron, and lets fall the amended Lead which in the Cupel leaves the Gold and Silver.

This way ſhews you the manner of uſing the *Sal Mirabilis* for the amending of metals.

N. B. Other metals may alſo be rendred ſpiritual by the *Sal Mirabilis*, by which not onely *Saturn* but likewiſe *Luna* may be graduated, or exalted to a golden degree. But yet *Saturn* is more commodious and fitter for this operation than *Luna* is. For when the *Mercury* of *Saturn* is graduated and reduced, there needs no other labour than the ſeparating of that *Regulus* on the Teſt, where the Gold and Silver is left behind in the Cupel. But if the *Lunar Mercury* be amended by graduation, and precipitated into a *Regulus*, it is firſt to be ſeparated by Lead in the Cupel, and afterwards the Gold and Silver are to be ſeparated by *Aq. Fortis*; ſo that there is requiſite a twofold labour, which in the operation by *Saturn* is but one; and therefore it is to be preferred as to theſe operations before *Lune*.

N. B. All ſuch ſubjects as have a graduating virtue, as *Lapis Calaminaris*, *Hematitis*, *Smiris*, *Granate*, *Talk*, &c. may be uſed to theſe labours. But however Gold is the beſt of all, which if ſo be that any one is minded to uſe, it behoves him to be furniſhed with ſuch Pots and Crucibles, which do not drink up the Gold, and ſo rob you of more than the produced gain amounts to.

Thus have we demonſtrated the uſe of the ſimple *Sal Mirabilis*, in the bettering of metals.

If ſome Sulphur be added to the *Sal Mirabilis*, it exalts the metals with a far more profitable graduation, and brings more gain than that ſingle operation, which is inſtituted by the *Sal Mirabilis* ſimply and alone *per ſe*.

LXXIV. *The manner of conjoyning Gold contrary to its nature, with any burning and Volatile Vegetable Sulphur, and of amending the other Metals, all done by the help of my* Sal Mirabilis.

Every body full well knows that there is no affinity or familiarity betwixt burning Sulphur and Gold, which is a fixt Sulphur; foraſmuch as they are exceedingly inimicitious to each other, and yet this enmity may be at length changed into the greateſt amity.

For 'tis uſual with all ſuch as are wont to ſeparate molten Gold from Silver by precipitation, to uſe common Sulphur about that precipitation, which by its innate Antipathy thruſts out the Gold from the Silver; the ſame thing is likewiſe done in the moiſt way, when the ſame Gold is precipitated out of *Aq. Regis* or Spirit of Salt, by ſulphureous Salts, ſuch as are Crude Tartar, Salt of Tartar, Spirit of Urine, and other Alkali Salts.

Theſe are to ſhew that Gold hateth and ſhuns Sulphur worſe than any thing, as being its Capital Enemy; and yet theſe moſt bitter enemies doth the *Sal Mirabilis* eaſily reconcile and convert this ſo great an enmity into ſweet friendſhip. This operation hiding in its Bowels great Myſteries deſervedly, and by all right lies hidden to this ungratefull World, if theſe Myſteries could be excepted which fell into the hands of mine enemies, in my Laboratory, unwittingly to me, who without any regard had to the Writings given me by way of an Oath under their Hands, do now make merchandiſe of ſuch ſecrets, and ſo baſely abuſe my good Will. Although the manifold uſe of this great Treaſure hath eſcaped them, upon this account it hath ſeemed good unto me to reveal unto the whole World, thoſe things that fell within their reach, that ſo it may be known to all, that ſuch great ſecrets proceeded from me onely, and not from others, nor from thoſe mine enemies themſelves.

Take one *Quinta* or ſmall weight of Gold, more or leſs, reduce it into thin leaves or plates, and bow them in the faſhion of a Cilinder, and add thereunto ſix, eight or ten parts of *Sal Mirabilis*, which matters you muſt melt in a Crucible with an accurate and ſtrong fuſion: When they flow, throw in ſome pieces of Coals into the Salt and Gold as they are melting in the Pot, that the *Sal Mirabilis* may diſſolve the Gold and Coals in the melting, which uſually is done in half an hour or thereabouts. The matter being poured out will ſhew you whether or no you have well operated for all the Gold, as likewiſe the *Sal Mirabilis* and Coals will be diſſolved and changed into a red Stone, that bites the Tongue as if it were Fire.

This Fire and red Stone, is the golden Carbuncle of the Ancients, for it ſhines in the dark like a burning Coal, and produceth ſuch wonderfull effects in Medicine and in Alchymy, which we have no mind at preſent to reveal. For this Gold being thus conjoyned contrary to its nature with Sulphur and Salt, is by that means unlockt, opened and prepared; as that it may by an eaſie buſineſs [or labour] be made ſpiritual, and that divers ways by divers *Menſtruums*, either Acid or Urinous, and be diſtilled over the Helms, and the pure ſeparated from the impure.

And albeit that I here make uſe of no Circumlocution and ſpeak no plainer, yet have I ſpoken enough to the Wiſe, and have ſhewed them ſuch a way to go in, as that whereby they may without labour, as 'twere arrive to the moſt happy and wiſhed end, unleſs God for ſome ſingular cauſes prohibit it.

But that I may not altogether ſhut the door of Art upon the Son's of Art, I will teach them the making of a moſt excellent Medicine out of this Carbuncle.

LXXV. *The way of making a moſt excellent Medicine out of the Carbuncle of Gold.*

THIS Carbuncle is to be beaten into Powder, and the beſt Spirit of Wine is to be poured thereupon, which may extract the Tincture. This tinged Liquour is to be poured off into another Glaſs, and more freſh Spirit is to be again poured upon the matter, that it may again extract in the heat more Tincture; theſe Labours you muſt repeat ſo often till

till all the Tincture is extracted, and the Spirit will be no more coloured. The Spirit being drawn off by distillations in a Bath leaves behind a most red Tincture in the bottom, in the form of a Liquour named *COS*, for here are present, *Colour*, *Odour*, *Savour* or *Taste*; the Colour and Odour from the Gold, and Sulphur; the Savour from the Salt. The remainder which is left after the Extraction of the Tincture is not to be thrown away as unprofitable, but to be converted with new *Sal Mirabilis*, and Coals made of Vine wood into a red Stone, by fusion, and to be so long extracted till all the Gold be converted with the vegetable Sulphur into a Medicine. For one onely labour serves not to extract the whole Gold by the Spirit of Wine; but the oft repeated labours attain to the end proposed.

Thus hast thou friendly Reader a Medicine of great moment and of great efficacy, in which the most pure parts of the Gold and of the Vine are conjoyned, nor can they be other than a most profitable Medicament for men and metals.

LXXVI. *How by the help of this Medicament, there may be conferred on the Seeds of Vegetables, such an excellent faculty of growth, that they may be as it were seen grow, and may obtain a much nobler Nature, Colours, Savours, and Vertues, than they are wont to get out of the most stinking Dung.*

MIX with one part of fat Lome, Clay, or Earth done into Powder, four parts of Sand, that so the fatness of the Earth may be somewhat allayed. With this mixture fill a Pot, such a one as the Gardeners are wont to keep their Flowers in; pour thereupon some Rain-water wherein is mixt [or dissolved] a little of that Medicament made of the Carbuncle, and plant or sow in that Earth some of those Herbs which abide unhurt by the Winters cold. Set the Pot with the implanted Herbs to the warm Air, but so, as that no Rain come at it, for the Rain may wash away that medicinal nutriment. When the Earth becomes dry, you must pour on more of the Medicine prepared of the Carbuncle, and that so often as need requires. So will the Herbs begin to grow, which if they meet with no other nutriment besides the Rain-water, they cannot attract any other whereby their faculty of growing may be promoted and encreased. And for as much as the Golden medicament was adjoyned to the Rain-water, the Herbs must necessarily draw it to themselves together with the Water, and obtain other properties than if they grew from the stinking Beasts Dung.

N. B. Under your Pot that contains your Herbs is to be put a Dish made of good and firm Earth, or else of some Metal, which may serve to catch the medicinal Water, that flows through the bottom of the upper Pot, or distills thence, and having received it may not drink it up but conserve it. Besides, it would not be amiss if some of that medicinal Water were put in the under Platter, which might always keep the bottom of the upper Pot moist, and so may supply the Herbs with an uncessant nutriment. It would be better also, if the Pot it self were made of some Metal and not of Earth, that so it may not drink in that precious Water, but rather conserve it.

LXXVII. *What is to be observed in this Operation, that a good effect may proceed from thence.*

IN the first place, diligent heed is to be taken, that the Lome or Earth you take, partake not of any salt faculty, nor hath any other corrosive Property, for many such Earths there be which would hinder and spoil the faculty of growing.

Secondly, there must regard be had to the moistening of the Earth, lest the Seed be choked with too much humidity, or in defect of sufficient moisture, dry up and wither.

Thirdly, there must be observed a measure of the Medicament it self, that neither too much, nor too little of the same be commixt with the Rain-water. For an overmuch quantity thereof burns up the Seed, and a more sparing Portion cannot yield nutriment enough to the Herbs.

Farther, some Musk or other things that emit a fragrant Odour may be therewith mixed, which addition is wont to get to the Herbs a most fragrant Odour. If so be a man fears to apply the aforesaid precious Medicament to this Operation, because of the Costs of the same, he may use that Tincture which we taught a little afore, to prepare of Coles onely without Gold; and which indeed will perform all those things, (as in reference to the growing faculty) which that Golden medicament is wont to perform; this onely excepted, *viz.* that the Herbs will not partake of that golden Property which they obtain by that Golden medicament.

The things we have here written and published concerning the promoting the faculty of growth in golden Herbs, though they seem not of any great moment, yet hide they under them mysteries of great moment, the which many Artists will apprehend, and convert unto their use.

LXXVIII. *How any Wood or any Wood-coal may be so prepared by the* Sal Mirabilis, *as to be capable of a long while resisting the Fire.*

DIssove some *Sal Mirabilis* in common Water, put some Wood or Wood-coal therein, let it lye in it for some days, or so long till it be well glutted with the Liquor and become ponderous. Then take it out and dry it very well at the fire, that all the moisture vanishing away may leave the *Sal Mirabilis* in the Wood: Then put it in the said Solution yet again, and take it out and again dry it, which labour will render the Wood so much the solider by how much the oftener it shall be repeated. By this means, all the Pores will be filled with the Salt and the Air wll be shut out, that it can penetrate it no more; without which Air no Wood can ever take fire or burn. If now you put such Wood or such Coals with other Wood and Coals in the fire, these [un-imbibed Coals, *&c.*] will be consumed by the Fire in a short time and be reduced into Ashes, but those others will remain untoucht, and may be taken out unhurt, though indeed even they too will be burnt if they lye over long in the Fire. This is certain concerning Coals, that those that are made of more weighty Wood, and which abound with a greater Quantity of Salt, such as are the Oak, Beech, Juniper, Vines, and other Trees whose Wood is ponderous dure far longer in the Fire than those Coals do which are made of Firr, Pine, Alder, Willows, and such like lighter Trees, and which have a lesser Quantity of Salt, and this now I do not mention barely for fashions sake, but to this intent, that occasion may be given from this kind of knowledge of drawing some profitable matter therefrom; as for Example.

LXXIX. *How*

LXXIX. *How ſuch kind of Woods which are always ſo near the Fire, as that they are ſtill in danger of being burnt, and thereby threaten damage may be conſerved from firing.*

DIſſolve ſome *Sal Mirabilis* in Water, and with a Pencil ſmear over ſuch Wood which by reaſon of its nearneſs to the Fire is always in danger of being burnt. When the Water is dryed up, moiſten it again with the ſame Water, and repeat this moiſtening ſo often, till it hath drunk in a ſufficient Quantity of the *Sal Mirabilis*, and become able to reſiſt the heat. By this means might men be often freed of many fears and cares, in ſhips dawb'd with pitch and in other places, where by reaſon of the too nearneſs of dry Timber there is danger of firing.

LXXX. *How by the help of* Sal Mirabilis *any Wood may be conſerved ſo, as for a long time to remain unhurt in the Water.*

HE that deſires to preſerve Wood, that it may not be detrimented by the Water nor rot in a long time, may be maſter of his wiſhes, the following way. Dry your wood very well, and being dry moiſten it with ſtrong Oil of Vitriol very exactly, and being moiſtened ſprinkle it with the *Sal Mirabilis* beaten into Powder, that it may ſtick well on to the Oil of the Vitriol. For the Oil of Vitriol doth in its penetrating of the wood carry in the Salt thereinto, and makes in the outſide thereof every where about a black Cruſt, juſt as if that wood had been burnt by the Fire. Now becauſe Coals reſiſt putrefaction, it muſt neceſſarily follow that the wood being in that wiſe ordered muſt remain a long time unhurt in the water.

LXXXI. *The Preparation of the* Sal Mirabilis *for this Work.*

THere ariſeth no ſmall difference amongſt the Salts themſelves from the different way uſed in making the *Sal Mirabilis*.

If the Oil of Vitriol wherewithal this *Sal Mirabilis* is prepared, be not by reaſon of the ſuperfluous humidity ſtrong enough, any one may eaſily conjecture that a good *Sal Mirabilis* cannot be made thereof, becauſe the Kitchin Salt would receive therefrom but little alteration. To prevent this inconvenience thefore, you are to take equal weights of Salt and Oil, that ſo one may be aſſured that the common Salt is well inverted, and made a good *Sal Mirabilis*.

LXXXII. *By what means trial may be made, if the* Sal Mirabilis *be duely prepared, and how it may be fitted for this and other Uſes.*

ITS Colour ought to be white and tranſparent; its figure is in long *Stria*'s or Chryſtals; its taſt is like Ice melting upon the Tongue and yields ſome bitteriſhneſs. Being dryed in the Fire and all the moiſture gone off, it will looſe three parts of its own Body, and retain a fourth Part onely; being diſſolved in Water it will recover thoſe three Parts again.

But on the contrary, if it ſhoot into a ſquare Figure, and hath as yet a ſaltiſh taſt, and being dryed loſeth but little of its weight; it is not worth a ruſh, and ſhews that either the Oil of Vitriol it ſelf was not good, or that there was not enough uſed to the Operation. Theſe things we would not bury in ſilence, that ſo we might well adviſe young beginners, and withdraw them from their Errours.

LXXXIII. *It may be queried, whether the* Sal Mirabilis *ſerves for the uſe of Artificers and Craftsmen.*

FOR anſwer, yes. For this *Sal Mirablis* is not onely able to perform things of great moment, and thoſe too, ſuch as are not common; both in Alchimy and in Medicine; (a rehearſal of which, we ſhall for brevities ſake omit) but withall it may be uſed in other Arts and Handycrafts with great admiration and profit; and this we cannot neither at this time demonſtrate becauſe of the but now mentioned brevities ſake. We will onely ſhew here, that even the pooreſt Husbandman, might (if they knew its preparation uſe it to notable advantage and profit.

LXXXIV. *How every Countreyman may encreaſe any kind of Corn or Seed with a thouſand fold encreaſe, by the* Sal Mirabilis *if he can get it.*

WE have aforetold you, that the *Sal Mirabilis* being ſo, as it is *per ſe*, is plainly unapt for the multiplication of the Vegetables, unleſs that corroſive Faculty be taken therefrom by lime or other *Alkali* Salts, [the which muſt be done] if you would expect therefrom any good concerning this multiplication. Here now will I diſcloſe a buſineſs of no ſmall moment; yet not to this end as if I would perſwade the Countreymen, to get for the future, or afford to their Corn ſo plentifull a faculty of encreaſing. No, no, I well know that they know not how to make the *Sal Mirabilis*, and if they did, yet would they not depart a Nails breadth from their Ancient Cuſtom. For 'tis a common Proverb, Old Dogs are very difficultly tamed; and this, the common Courſe of mens Lives doth clearly teach; wherein you'l find, that a man hardly unlearns that in his old Age which he learned in his Youth; ſo that an Old man doth very difficultly ſuffer himſelf to be withdrawn from thoſe things whereto he hath been accuſtomed when young. Neither is it my purpoſe ſo to do, for as much a I inſert the things here mentioned by me, for this end onely, *viz.* that the poſſibility and wonderous Properties of the *Sal Mirabilis* may be brought out of Darkneſs unto Light, and may be made evident to the whole World.

I would likewiſe be thus underſtood as touching other Workmen, for whom theſe things are not delivered or treated of, that they ſhould deſiſt from their old Cuſtom, and obey my admonitions and inſtructions; but for this end it is onely that I publiſh theſe things, *viz.* that they every one may know that my *Sal Mirabilis* can be an helper to men of all ranks, and alſo may bring even to the Craftsmen themſelves and to the pooreſt Husbandmen, great fruit and benefit.

Now when you hear it mentioned that ſome Grain of Corn is augmentable beyond the uſual Cuſtom, by an unheard of multiplication, it muſt of neceſſity be, that it emit more than one, two, or three Stalks, for as much as ſo few Stalks, cannot yield ſo great an Encreaſe. But now if one Grain is to put forth ſo many Stalks, it is wholly neceſſary that it be done by ſome certain ſingular and ſtrong

 eſſicacy

efficacy of expulſion ; and that too, even preſently and at the beginning when the grain is at firſt ſown in the earth. For whatſoever is not here done even at the beginning, will never be done afterwards

For all the ſtalks that ſpring forth after are ſmall, and quite unfit to bring forth Corn. So then, ſeeing that many ſtalks are to break out at one and the ſame time out of one grain, if an eminent multiplication is expected to follow, then verily 'tis even neceſſary that ſome help be adminiſtred to that ſame grain afore it be put in the earth, that ſo it may plentifully grow and be ſpeedy, in preſently ſending forth even at the very beginning, good ſtore of ſtalks.

The Countreymen know not any thing ſerving to ſuch an operation but onely Dung ; but I do even now again ſay as I have often done afore, that this effect of the uſual and common multiplication ariſeth not from the Dung it ſelf, (as being but the outſide Husk) but from that ſulphureous Salt that lies hidden in the Dung. Hence it is, that by how much the purer and better the Salt is ſo much the ſpeedier and more efficacious an operation ariſeth therefrom. If then, that ſuch a Salt can be made by Art, which performs the ſame that Dung does, it altogether follows that we are able to do the ſame without Dung, and that far better than by Dung, in which the Salt is ſo much dilated, and which (by the benefit of Art) we contract into a narrow compaſs.

I hope the well minded Reader will not be diſpleaſed that I uſe ſo many words here, about the ſtinking Dung of Animals, becauſe I can't indeed uſe in this place any other manner of ſpeaking, ſeeing I intended the laying open of this thing, and therefore am I even compelled to ſpeak of the ſame: For he that minds the publication of any thing, cannot do it, unleſs he ſpeaks of the ſame. And although that Dung may ſeem to ſome finical Men a very contemptible thing, yet notwithſtanding it is the onely and principal *Medium*, by the help whereby our daily Bread and the neceſſary ſuſtaining of our Bodies is had. But as for the ſtinking Dung of Animals, I even remit it to the Dunghill, and return to my *Sal Mirabilis*.

LXXXV. *Whether or no a thouſandfold encreaſe may be had of Corn by the* Sal Mirabilis.

MELT one or two pounds of *Sal Mirabilis* in a Crucible, then throw in ſome Coals and diſſolve them, and reduce them by Solution into a red and fiery Stone ; which matter being compounded by melting of them both, beat into Powder and pour thereupon common Spirit of Wine, that it may wax red by extracting out the Tincture. Pour this out into another Veſſel, and pour on other Spirit upon the aforeſaid matter. And this pouring on and canting off, is to be repeated ſo often till all the redneſs is extracted. By this extraction you ſhall get a ſulphureous Salt, fit to ſteep or macerate Corn withall; becauſe it agrees very well to the properties of that Salt which ſticks hidden in the Dung of Beaſts: Now I uſe Spirit of Wine to the extraction for this cauſe, for that it haſtens the germination or budding of the Seeds even as well as the Salt doth, and enricheth it with an emiſſion of many Stalks. But yet your Spirit of Wine muſt not be over ſtrong, for then it would hinder the faculty of growing, the which thing even the Salt will alſo do if too great a quantity thereof be added to the weaker Spirit of Wine, becauſe it would by burning up the Seed, be an impediment to the faculty of the Seeds growth. It is therefore neceſſary that a good regard be had (in thoſe operations) to a due meaſure. For an overmuch acceſs of any thing is wont to be no leſs hurtfull than a defect or clearly wanting of the ſame.

This is the preparation of the *Sal Mirabilis*, neceſſary for the macerating of Corn, that ſo it may produce many Stalks ; now follows the true and genuine uſe thereof in macerating of the ſame.

LXXXVI. *The true and right way of macerating Corn in the* Sal Mirabilis.

THere are ſeveral kinds of Corn, and of theſe various and different ſorts. Hence is it, that one Seed is longer a macerating than another is; and that becauſe one becomes ſoft ſooner than doth another, or attracts humidities to it ſelf quicker than another, ſo that regard is to be well had to the difference thereof. Rye and Wheat are encompaſſed with thin Skins, and therefore are the ſooner macerated, Oats require a longer time, and ſo doth Barley which has a yet harder Husk than the Oats hath, and therefore requires a longer time for its maceration. But as touching theſe things, every one may find them out by his own underſtanding and often experience, becauſe it is impoſſible to mention all things ſo clearly and perſpicuouſly. But this is a general rule, your Corn is to be ſo long left in ſteep, untill you may eaſily bite it a pieces, for you muſt beware of ſoftning it too much, for then it would preſently putrifie, and by that its putrefaction corrupt and ſpoil all the growing faculty. But experience will inſtruct you far more commodiouſly and more perfectly herein, than a larger deſcription can.

LXXXVII. *The true and right way of ſowing your macerated Corn in the Earth.*

ANY one may eaſily conjecture that if the Corn macerated by the aforegoing way, be ſown in the Fields the uſual way and ſo thick as the Husbandmen are wont to do, it will not ſucceed becauſe of the overmuch thronging and thickneſs by which the Corn would hinder each other and ſo choak themſelves. This incommodity therefore is to be prevented, and ſuch macerated Grain to be thinly ſown in the Fields that they may have room for the freeneſs of Air, and ſo may grow up and not ſpoil each other by a mutual ſuffocation.

Nay rather that the more accurate diligence may be had or uſed about this ſowing, a Man may make him ſome wooden Inſtrument, whereby together and at once many grains of Corn may be ſown in the earth in good order and at a certain diſtance ; concerning which labour I have purpoſed to ſpeak more at large in another place. For ſo no grain will unprofitably periſh, and with one Sack of Corn may be ſown more Ground than ſix, eight or ten Sacks are wont to do otherwiſe ; my too ſhort time conſtrains me to break off my diſcourſe concerning theſe things.

LXXXVIII. *By what means the* Sal Mirabilis *may bring profit to the Dreſſers of Vines.*

IF there could be a good quantity had of *Sal Mirabilis*, and that without great coſts, 'tis without doubt

doubt but the Vines might be made very fruitfull therewithall.

But becauſe they are ignorant of the preparation thereof, who dreſs Vines ; 'tis expedient for them to acquieſce in their Beaſts Dung, or make uſe of that onely for the fattening and dunging of their Vines, which is made of common or Kitchin Salt by inverting and Alkalizating it by *Calx-vive*. Unleſs a man has Vines about his Houſe or in his Garden, and would make them fruitfuller than ordinary. For to make tryal thereof in great Vineyards would be too coſtly.

But yet I will propound another way to the Vine dreſſers, by the help whereof they may get plenty of Wine every year. I have at large taught in my foregoing Writings, and that by various deſcriptions, by what means one may be Maſter of noble and ripe Wines every year, yea even in thoſe times, in which by reaſon of the coldneſs and unſeaſonableneſs of the Air, and the want of the Solar-beams, the Grapes cannot attain their due maturity: and withall, how in thoſe places where they ſeldom or never grow ripe, [they may be ripened] by concentration by the help of the Fire, or elſe by fermentation with their own vinous ſpirit diſtilled out of the Lees, and added to the ſaid Wine ; [having I ſay already taught this] there's no need of repeating it again. Yet nevertheleſs if God lengthen my life out ſo long, I have purpoſed to write a peculiar Book of the propagating and bettering of Wines.

But that I may ingratiate my ſelf with thoſe who not much caring for poor thin Wines, deſire to have ſome noble Wine in their Cellars, I will here reveal a certain ſecret which may not onely refreſh the body and ſpirit of many thouſands of Men, high and low, rich and poor, throughout all *Germany*, yea and all *Europe* too ; but alſo adminiſter them no ſmall profit.

I have taught a little afore, how by the help of the *Sal Mirabilis*, and of the concentrated and cold Fire of Salts, a Man may make his Gueſts different Wines out of one Cup, and therewithall refreſh them ; and I have likewiſe ſhewed, that ſuch a bettering of Wine may be exerciſed in moſt places, with notable profit.

The truth of which thing, it hath ſeemed good unto me to demonſtrate divers ways, for the ſake of my Neighbour.

I have frequently laid open in my Writings ſome excellent ſecrets, and have withall made a diſcovery of the moſt great benefit which one may thereby receive.

But becauſe I have not pointed out with my Fingers where and whence ſuch notable profit is to be gotten, the moſt part could not apprehend or find the ſame, and have therefore rejected the thing it ſelf being it was not ſo perſpicuouſly and clearly laid open, as unprofitable and worth nothing. And now leaſt it thus happen to this ſecret, if I ſhould not ſhew and point as it were with my Fingers, the benefit thereof, and if therefore ſuch ſecrets lying in the dark ſhould not come forth to the profit and uſe of mankind, (which would be a grievous thing and to be lamented, if it ſhould not,) it hath ſeemed good unto me to manifeſt the utilities of the ſame.

LXXXIX. *By what means notable profit may be gotten by my Water-attracting Magnet.*

FIrſt of all, it is no ſmall benefit when the overmuch Water is taken away from the poorer ſort of Wines, with which *Germany* doth every where almoſt abound, and the Wines made nobler, ſtronger, more efficacious, and more durable, and do get a far more acceptable ſavour.

For the unripe and watery Wines are not of any long laſting, but do in a while loſe all their ſavour and all their ſtrength, and become mouldy, and corrupt with lying, and 'tis not ſeldom that they grow tenacious, or ropy, thick and muddy, reddiſh and filthy : all which incommodities doth my Magnet cure in the ſpace of one onely hour, by the drawing away the overmuch wateriſhneſs.

XC. *The ſecond benefit.*

IF the plentifull Vintage or large encreaſe of the Wine ſhould be more than you have Barrels to fill, nothing can be more acceptable than that the Wine may be concentrated by the Magnet, (which draws to it ſelf the Water and turns it into Ice) by extracting the overmuchneſs of the Water, that ſo by this means the more contracted Wines may be laid up the more commodiouſly, and may if not very good, be rendred better.

XCI. *The third benefit, and which is moſt acceptable to all Maſters of Families.*

IF ſo be that the Maſter of the Houſe had a whole Cellar full of Wine, and every Veſſel filled with the like or ſelf ſame noble Wine, without any difference ; then verily the Maſter and Servant would be of equal degree, nor ſhould the Maſter have any prerogative above the Servant. But now uſing the help of the ſaid Magnet, he may have his Wines bettered as he pleaſeth, and have divers VVines in his Cellar, as we taught a little above ; if, *viz.* he ſhall draw from it the unprofitable watery part.

XCII. *Another way of getting profit by the Magnet's drawing the Water out of Wines.*

THE Anatomizing and examen of VVine diſcovers, that in twelve meaſures thereof, there is about one of more noble ſpirit, and almoſt one meaſure of Tartar. The reſidue are nought elſe but an inſipid water altogether like to common water. Now when the Wines are to be tranſported out of the Countries wherein they grow, into more remote places, what need is there of carrying the water with it ſo long a Journey? would it not be better to ſeparate ſome part thereof from the Wine, and ſo tranſport the VVine, and let the water alone, and thereby ſhun a great deal of charges disburſt for the carriage of water into ſuch places as have enough already? would there not redound a great benefit hereby, both to the Buyers and Sellers of Wines? yea verily, I believe that there will not onely redound unto them a great conveniency, but withall a great deal of Treaſure.

XCIII. *There's yet another way of getting notable profit by the ſaid Magnet*, viz. *if the ill taſt and fetidneſs be taken away from the Brandy, uſually made of Corn.*

THere is ſome mention made in what went afore concerning this amending ; but 'tis not done ſo clearly and manifeſtly. I will therefore open it more clearly and more perſpicuouſly in this place.

Mix one part of your Brandy made of Corn, with two parts of common water poured thereunto, that the

the ſtench and ungrateſull ſavour may diffuſe it ſelf into the added water. Having ſo done, you muſt again free this Brandy thus tempered with water by putting your Magnet thereinto, and ſo will you draw therefrom all the ſtinkingneſs, and 'tis juſt as if you had waſhed that VVine, and rinſed off all its filth.

XCIV. *The benefit purchaſed by ſeparating the Water from Vinegar.*

IF you would have benefit by this liquor, the ſame may be done by the ſame reaſon; in thoſe places out of which it is tranſported into other Countries; if, *viz.* the unprofitable water be removed after the ſame manner as we taught to be ſeparated from the VVine.

XCV. *By what means good Wine and Vinegar may be every year prepared by the help of this ſame Magnet, in thoſe Countries in which the Grapes do not ripen.*

ALthough that in all the Coaſts ſcituated upon the Rhine, as in *Rhingovia*, *Moguntia*, *Wormatia*, *Algentorati*; in *Alſatia*, the *Palatinate*, *Franconia*, *Auſtria*, and the Dukedom of *Wurtenberg*, (in which places, the Wines do for the moſt part arrive to their perfection every year) this Art be not ſo very neceſſary; yet nevertheleſs *Saxonia*, *Miſnia*, *Thuringia*, *Suevia*, and *Bavaria* do ſtand in need thereof; in which Countries the Wine doth for the moſt part remain acid, unleſs the Summer hath by a ſingular chance hapned to be very hot. For in theſe places it is no leſs profitable than pleaſant to drink a ſweeter and nobler Wine inſtead of the more acid Wine, if ſo be one could get it by the help of the ſaid Art. Beſides, this ſame Art yields no ſmall profit and benefit in thoſe Countries, in which though the Wine is (as we ſaid but now) wont to be noble. For it may happen that ſome unſeaſonable Weather may hinder the ripening of the Grapes, and that the Vineyards wanting the due heat of the Sun cannot arrive unto maturity. For oftentimes in one and the ſame Countrey, there are divers Wines produced, ſo that one ſort exceeds another in nobility and goodneſs. Thoſe therefore that are good and generous need not the help of this Art, but contrarily the ſmaller and leſs noble Wines want it. Hence I conclude that in all the Countries of the World, whereſoever Wines are made, this Art may be ſerviceable and profitable to any one.

XCVI. *How in thoſe cold Countries*; *as in* Poland, Denmark, Suedeland, Norway, *&c. Which by reaſon of the Coldneſs of the Air admit not of making Wine, there may nevertheleſs good Wine and Vinegar conducive to the health of Man be made.*

THough the Cold may ſo hinder as that Vines will not grow, nor Vineyards be, yet notwithſtanding thoſe places ſo obnoxious to the Cold, have plenty of Apples, Pears, and ſuch like Tree-fruits; whoſe Juice being preſſed out, and fermented, and after the Fermentation, freed of the greateſt part of the unprofitable water, will give a better and more durable Drink, than that which is made the uſual way of Apples and Pears. For this drink cannot laſt long becauſe of the muchneſs of the humidity, but becomes ropy, acid and muddy, and ſo corrupts.

So likewiſe may thoſe Countries that abound with Corn be rendered partakers of moſt excellent and wine-like Drink, which may be uſed and drunk inſtead of Wine, to the great benefit and advancement of the health of the Body; and it is to be thus done.

Firſt of all, let very good Wheat be made to germinate [or ſprout] by ſtewing in ſome gentle heat; [as in making of Mault] then after the ſprouting let it be put in ſome warm Furnace, or in great Coppers, and ſtirred about with ſome wooden thing without ceaſing till it be dryed. In this Operation you muſt have an eſpecial care, that the Corn ſmatch not of the Fire, which is then brought by drying to a ſufficient hardneſs, when it is not ſoft in biting it with your Teeth, but leaps as 'twere in pieces; this is a ſign that you have done your work well. Having prepared it thus, let it be broken [or ground] and boiled after the manner of other Ale, without Hops; and then after it has fermented let it be freed from its ſuperfluous moiſture by our Magnet. So will you have remaining a ſweet Drink not much unlike to VVine; which Liquor if you would yet have more near in its likeneſs to VVine, you muſt put in for every Tun or every Butt about a pound of Tartar in the Fermentation, that ſo it may ferment together with the Corn, and may give unto this Drink a winy Taſt.

After the ſame manner may excellent Metheglin be made of Honey and Sugar, or ſuch a kind of Drink as but little differs from the Savour of VVine. An Art, verily, moſt profitable in thoſe places which have no VVine, but have that defect ſupplied by the great Quantity of Honey and Sugar. The manner of making ſuch a kind of Drink is this.

Let there be added to the Honey ſo much water as is ſufficient, for their boiling together in a Copper, and let them being boiled be diligently ſcummed ſo long till the Honey becomes thick again, and gets a duskiſh or a reddiſh Colour, which is a ſign, that the leſs ſweet, and leſs honied Savour is removed away, by the boiling.

To this Honey reduced to the ſaid thickneſs, let be again added as much water as is ſufficient, that they may be boiled together, and being boiled put up in Barrels. Whilſt it is yet warm ſome Ale-yeſt muſt be added, which being fermented, renders this Liquor ſo ſweet that it is but little inferiour to Wine; moreover it will come nearer to the Taſt of Wine, if a due part of diſſolved Tartar ſhall be added thereunto in the Fermentation, that ſo being fermented together herewith, it may acquire to it ſelf a winy Taſt.

N.B. But here good heed muſt be had, that in the laſt Solution there be not taken too little water, but rather more than is wont to be taken in the making of common Mede. The reaſon is this; becauſe the Honey gets not its due Fermentation, but retains its uſual and a kind of nauceous Sweetneſs, and cannot be made partaker of a winy Savour.

But now, water enough being added, promotes the Fermentation, and cauſeth that it gets its Purity and Clarity much ſooner, and is of an excellent ſweet Savour. After that this Metheglin hath gotten the requiſite Clarity, the ſuperfluous water is to be abſtracted thenceſrom by your Magnet, which water being removed, the remaining ungrateſull Savour of the Honey going away together with the water, vaniſheth, and this VVine of the Honey, gets its ſtrong Spirits from the Honey, and has a winy

winy Savour from the Tartar. If any one be so minded, he may add to the Honey in the first boiling, some Spices, or which is better, may hang them in a little Bag in at the Bung, that so they may be fermented with the Metheglin, and give it a sweet Savour. The Spices are these that follow: Cardamoms one, Coriander two, Orris Roots three parts; the which will give the Metheglin a fine Taste. The Flowers of Elder make it taste just like VVine made of the Apian or Muscadel Grapes. Cinamon and Cloves also do give it a delicate Sweetness. But every one may use such Spices as he thinks best, according as he fancieth this or that Taste. Of such Metheglin is made most excellent Vinegar, which scarce is inferiour to wine Vinegar though of the very best Sort.

XCVII. *Whether or no, there be any other benefit, which our Magnet can bestow.*

HE that shall onely diligently enquire by trials made, will without doubt, find, that such a Magnet as attracteth water, can be profitable many ways; which to treat largely of here, the time will not permit. For because that this Magnet draws out of all Liquors, their superfluous water, it doth certainly bring much Benefit, and manifold Fruits, very many of which, we would here dclare if need required. But the time admits not of any longer dwelling about these things. But yet, however, I will reveal an Art for the Poor's sake who have no VVine growing, nor any money to buy it, and are therefore enforced (but especially in the winter Season) to drink cold water after their hard Labours;) by the help of which said Art they may have good VVine to drink all the year both in the Summer and VVinter months; I mean in those places in which there s plenty of VVine made, and is in the Autumn Season squeezed out with wine Presses.

In all those places in which store of Grapes are prest out with Presses, there is great store of the husks, the which is partly kept for the Beasts to nourish them in the VVinter, and partly thrown away as unprofitable, especially in those Seasons which afford a great Quantity of VVine. But if so be that the Wine Harvest be somewhat poor and not so plentifull, then they pour water upon all the husks or on some part of them, and leave it so for some days, and again press them; and thereby is made a Drink that has some kind of wine-like Savour which is given to the Servants, and other Labourers to drink instead of bare water.

But now in such Years wherein they are thoroughly busied in curing or making much VVine, they have not the time to bestow about making that Drink then. Nay sometimes they have such a deal of VVine that they have not Cask to put it in, but are compelled to give away their smaller VVines to others, aud stuff their Cellars with the more noble.

If therefore the poorer sort would have now and then a good Draught of VVine, they must get them some large Vessels which they must fill with the Offal of the Grapes, and with water poured thereupon, and leave them thus, so long untill the rich People have done with their wine Presses and stowed their VVines in their Cellars. Then may they also press out their second VVines in the rich mens wine Presses, and by the oft-spoken of Magnet separate the unprofitable water therefrom, and so lay up their VVine, the which will last and abide good and durable all the Year about, which it will not otherwise do. For such kind of second VVines dure only (for the most part) but the VVinter and Spring, and part of the Summer, and the utmost time they remain any thing good is but till the Month of *July*, afterwards they grow ropy or musty. But now the unprofitable part of the water being separated, they get a shorter or longer durability according to the moreness or lesness of their Concentration. This advice and secret was I willing to bestow upon the poor that they may also drink good VVine

But they may demand where should we get us such a Magnet, by the using of which we might make our second VVines good? I answer, they may borrow it of the Rich men who have Vineyards, for so long; and when they have done with it may restore it them again; for it is so lasting that it never loseth any thing of its Body nor of its Virtue, but always remains good. The rich men therefore will buy it of the Chymists, the preparation whereof is clearly and perspicuously delivered in my first Century. If now this be done (which I doubt not of) the Chymist by preparing, and the Merchant by using of the same will reap no small Benefit and profit. And questionless, there will be found some men that are studious of new things, who will make trial of this Concentration of Wines in small experiments; that so they may fish out the possibility of the thing. But I know not whether they will exercise this Operation in a greater Quantity or no. For its neither here nor there to me whether they will exercise this Art or let it alone. For this is the natural disposition of most men, they would very willingly get store of gain, provided it could be done without great labour and much trouble. From hence it is certain, that this Art of Concentrating Wines by cold Fires will not be so soon common, especially because I have not here delivered how such a Magnet may be made in great Quantity, and applied to use.

But yet I think I have sufficiently done [or hinted at] those things I have revealed. Let others draw out of their own store too, if they have any thing. More things I could not reveal, for many weighty causes which I count it needless to mention here. Very many men will commit many Errours, e're they attain the right Scope. Verily it would be much better if there were a greater Number of such Persons as readily understood this Art; especially in those places of *Germany* in which the Wines are so acid, that it will make ones Eyes run with water if a bigger Draught than ordinary be drunk to quench Thirst. And therefore in those places Ale is in the most esteem, and indeed it is no contemptible drink, if good, but yet it is not at all comparable to the noble Wine, concerning which noble Liquor these Verses may rightly be pronounced.

With what a lovely gift are all things blest
By th' noble Wine from tender Vines expreſt,
To ſick mens pains it doth an eaſement bring,
It joys the Countrey Peaſant, makes him ſing.
And you ſhall ſee that that man whom to day
By means of Wine lies tumbling in the way,
Will on the Morrow have his t'other lay.

There are many Songs in the praise of Wine, but Ale is not celebrated with any ditty, though it be never so good. Upon this account therefore the noble Juice of Wine is not undeservedly preferred before all the rest, provided it has its due generousness and excelling goodness. But if it be not good, 'tis wholly expedient to help it, lest by keeping its Sou-

riſhneſs and wateriſhneſs it periſh. But filthy covetouſneſs bears too great a ſway upon mortals, inſomuch that there are too many to be found that would rather pour water to their Wine and ſpoil it, than better it by abſtracting of the water.

I have often heard the complaints of Vineyard Maſters in thoſe Seaſons, in which they have had whole Cellars full of ſmall and poor Wines, which have not arrived to ſo much ripeneſs as to be able to be ſold and tranſported into other Countries. Hence comes it to paſs, that if they lie along while and be not drunk up, they degenerate more and more, and become exceeding poor, and at length corrupt by lying and ſo periſh for altogether ; unleſs it happens by chance that ſome years of a more happy Vintage do ſucceed, with which more noble Wines they may mix their ſmall ones, and ſo ſell them off, but yet with a poor profit, becauſe the Merchants are not wont to buy midling Wines, but the very beſt of all. But they may have noble Wine every year by that means that I have ſhewn. For if one eighth part of water were extracted from the Wine, it might have the name of good Wine. But now if a fourth part of that water ſhould be taken away thencefrom it would become far more excellent, for a little water is able to make a moſt noble Wine ſmaller and more baſe, a tryal whereof you may make as follows.

A Hogſhead of rich Wine, containing ſome ſix Reniſh *Oma*'s or *Aulms*, coſts an hundred imperials; yea [ſometimes] more, an hundred Duckets; Now if you take thencefrom one eighth part of the meaſure, and put in the room thereof one eighth part of water, you will find by the taſt, that its goodneſs is ſo much diminiſhed, that that Veſſel will be ſcarcely valued at fifty imperials. But if a quarter part be taken away, and ſo much water put in its room, any one may eaſily conjecture that ſuch a Veſſel filled with ſuch Wine will be hardly judged worth twenty imperials.

So then by this way that I have told, any Wine might be brought to ſuch a nobleneſs by taking away one fourth part onely of its water, that a Veſſel which afore would have yielded but twelve imperials, will afterwards yield three times the price.

By all this that hath been ſpoken may any one eaſily conclude the truth of the true Alchymy, and what incredible benefits may be reaped thencefrom. From this ground I ſay, that that delicate ſup of Wine which I have here taught the preparation of will ſo inflame many, even of the enemies of Alchymy, that they will for the future put their hands to the Coals, and try to get thereby ſuch a delicate Magnet, and to have it by them.

This Magnet will alſo help not a few Alchymiſts themſelves that are in ſtraights and want, and afford them a good Cup of Wine ; whoſe Vineyards, Houſe, and all their ſubſtance, the ſmoak and hot fire hath already driven up the Chimny, and [in lieu thereof] this cold fire will recover them again with no contemptible increaſe. For this Leap-year 1660 is the firſt year ſince the World's Creation, in which the miſerable Coal-blowers may arrive to a way of getting their Bread, if they will but ſtretch out their hands. And that I may be here well underſtood, I don't onely mind the concentration of Wine, for there are other moſt profitable uſes to be found out of theſe cold fires ; which time will manifeſt.

It ſeems good unto me to add by way of an overplus (becauſe I have taught the making of a Cup of good Wine, and there is a great familiarity 'twixt Wine and Corn,) the ſhowing away how one may get a moſt delicate ſort of Bread and of an excellent ſavour, that ſo he may be furniſhed with the choiceſt of Food and Drink.

Let ſome part of the water be extracted by the cold Magnet out of new Milk, that it may be made better than the common Milk. This would be a moſt excellent nutriment for the ſuſtaining of Infants, whoſe Mothers die too ſoon. For every Infant cannot bear raw Cows Milk ; and if the ſuperfluity of the Water be removed by boiling, the Milk (not brooking much boiling) doth eaſily taſt of the fire, which would not be if it were freed of its water by the oft mentioned Magnet, for it would remain ſweet, and be of an excellent Taſt. With this fat Milk, moiſten your Wheat Meal, (which muſt be of the beſt) in the ſtead of water ; and let the Bread be baked, and without doubt the Bread will be of an excellent Taſt, which could not be by the common baking, although that Butter were added thereunto. One may feed upon this Bread alone, without Cheeſe and Butter, becauſe the Cheeſe and the Butter are with the Milk in which they lie hidden, added unto the Bread. Such Bread is ſtrong nouriſhment and far better for filling and nouriſhing than the common ; and in eating thereof one may eaſily commit exceſs, becauſe it notably pleaſeth the Pallat by the ſweetneſs of its taſt. For ſo it happened on a time to me, for eating ſuch Bread as was made up with fat Sheeps Milk I exceeded a mediocrity in my eating. But verily this is wont to happen to ſuch as in their eating and drinking, abuſe the delicate Meats and Drinks, and ſo fall into the hands of the Phyſicians, becauſe indeed the moſt Diſeaſes do ariſe from too much fulneſs and ſurfeiting. And therefore good reaſon is it that a moſt ſpecial regard be had to a mediocrity and temperance in all things.

XCVIII. *How the Water attracting Magnet may be ſerviceable to Phyſicians.*

IN my opinion a Phyſician may very well examine the Urine of the Sick, and Anotamize the ſame, and that more eaſily than by an external bare aſpect or looking-on onely, if, *viz.* he ſeparate and take away therefrom a part of the water by the Magnet. For by this means he will diſcern a great difference betwixt the one and the other part, and know the cauſes and properties of Diſeaſes ; and that far better and more certainly than by a bare outſide view, after the Gallenical faſhion, or by the weight, and by Diſtillation according to the cuſtom of *Paracelſus* and *Turnheiſer* ; But I leave it to every ones pleaſure to enquire which of theſe three ways is to be preferred.

And now follows by way of Corrolary or Surpluſage, a deſcription of certain moſt excellent Medicines to be adminiſtred, for the curing of moſt greivous Diſeaſes both in Men and Beaſts.

XCIX. *The Cure of the Stone in the Reins and Bladder, and likewiſe of the Gout.*

THE Stone of the Reins and Bladder, and the Gout, are judged to be the moſt greivous Diſeaſes, and in very deed they are moſt grievous Sicknelſes, but eſpecially the Gout, which being various and manifold afflicts the Body of Man with moſt grievous Pains. Now for the cure and removal of theſe

theſe Diſeaſes, I will preſcribe a certain and ſafe Medicament, eaſily preparable, and of ſmall charge.

Take one or two pounds of white Tartar, and pour upon every pound beaten into Powder about ſome eight or ten pound of common water, which ſet over the Coals in a well glazed earthen Pot, and boil it ſo long, till all the Tartar ſhall be diſſolved by the water, which you may try if done or no with a clean wooden Spoon, putting it to the bottom and ſeeing if there be any left undiſſolved. In the boiling you muſt very diligently take off the Scum with a wooden Scummer, that ſo there may remain no impurity. After that all the Tartar is diſſolved and that there appears no more Scum, evaporate the water ſo long till a thin skin appears at the top. Then take off the Pot from the Coals, and ſet it in ſome cold place, and leave it there unſtirred for a day, and there will ſtick on to the ſides of the Pot, delicate Cryſtals like a Dye, having a Cubical form. *Paracelſus* calls this mundified Tartar *Ludus*, and that very properly, and without doubt he did ſo, becauſe it gets (after its purification the ſhape of the ſquare Dice. Out of this pure and Cube-like Tartar is prepared an univerſal Medicine againſt all tartarous Diſeaſes, as follows.

If you have one pound of this pure and Cubical Tartar, reduce one pound of Crude Tartar into a white Salt by Calcination; the which you are to diſſolve with ſo much common water as is neceſſary to its diſſolution; filter the diſſolved Salt through Cap-Paper, that you may have your ſharp *Lixivium* freed of all its Fæces. Pour this *Lixivium* into the glazed Pot wherein your pound of the ſaid purified Tartar is, and boil it accurately therewithall; in which boiling the Tartar will be eaſily diſſolved by the *Lixivium*, and be turned with the ſame into a ruddiſh coloured juice; though that your *Lixivium* and Tartar had each of them a white and clear colour. The reaſon is this, becauſe the Tartar is as yet defiled with many hidden and black Fæces, and doth at length after its ſolution with the *Lixivium* render them viſible and manifeſt. Paſs this muddiſh ſolution through a filter, and it will be a yellow liquor, and leave many Fæces in the Philter, good for nothing but to be thrown away, for they are of no virtue more. Verily 'tis a thing worth the admiring, that there ſhould yet be ſo many Fæces left in ſo well purified a Tartar. This liquor being thus prepared is very profitable for the taking away and curing of all kinds of Tartarous Diſeaſes, by being daily uſed, or however, it doth at leaſt ſtrongly tame their violence, but you muſt firſt purge the Body by Antimonial Medicaments, one of which we will preſently ſhew you.

N. B. This Medicament will be yet far more noble, if all the humidity be vapoured away and the reddiſh Salt that is left be diſſolved in good ſpirit of Wine and filtered, and the ſaid ſpirit of Wine be again ſeparated therefrom by a gentle Diſtillation. For ſo by this ſecond ſolution, there will be ſevered yet more Fæces and the Salt it ſelf will get a yet greater purity.

This Salt may be ſafely uſed as a moſt precious Treaſure againſt all the aboveſaid tartareous Diſeaſes; For it expells Urine, and drives out all the impurities out of the Reins and Bladder, and hinders the gathering together, and generation of Sand or Stones in thoſe Members.

But if there be already Stones generated, and that they be not too hard, it conſumes them by little and little, and carrys them off; provided that Antimonial purges be (as we ſaid but now) afore uſed to purge the Body with.

I have in theſe few words taught thee how the *Ludus*, that is, the Dye-like figured Tartar is changed by its own proper liquor Alkaheſt, or its own Alkalizate Salt into a Medicine reſiſting all Tartareous Diſeaſes. The Doſe thereof is a Scruple in Wine, Ale, or other Vehicles, oftentimes every day, or twice at the leaſt, *viz.* Morning and Evening, for ſuch as are fifteen or twenty years old and upwards, and they muſt faſt after the taking of the medicament, for ſome due time.

Such as are younger, from three, four, to ten, or twelve may take at one time, three, four, ſix, eight, or ten grains, according as they are older or younger.

This ſo excellent a medicament have I deſcribed for the benefit of mankind, nor is there as far as I know, a better, though it ſeems to ariſe of ſo vile a Parentage, and be ſo mean. Suffer not thy ſelf to be affrighted by any one, but uſe the ſame boldly, whenſoever neceſſity requires; and firmly believe me that thou wilt not find a better, I do not deceive thee; and the truth hereof will be demonſtrated by its uſe.

This is a quick and wonderfull purification of Tartar, and a changing it into a ſweet Salt, which is neither ſweet nor ſour, but a midling taſt 'twixt both, and it gets a middle nature, from the Acid and the Alkalizate Tartar. Now follows the Antimonial Purge.

C. *An univerſal Antimonial Purge to be uſed in all grievous Diſeaſes, with a very happy ſucceſs.*

TAKE of Crude Antimony, Tartar, and Niter, of each alike, Powder them each apart, commix the Powders, being mixt, put them in a melting Pot or Crucible, and kindle them with a live Coal, that by this kindling they may flame up, and go into a ruddiſh kind of coloured maſs. Your Pot being yet hot ſet it into your Wind Furnace, and melt it, that all your matter may flow in the Crucible like water, then pour it out into your Cone, and being cold take it out, and ſeparate the *Regulus* therefrom, and lay it by for other uſes, becauſe 'tis not ſerviceable for the operation here minded. Now out of one pound of Antimony, you'l have eight Lots, or four ounces of *Regulus*, ſo that of your one pound you will get a *Regulus* of four ounces or the fourth part of the pound. The *Scoria*'s which will be of a reddiſh colour and of a fiery taſt upon the Tongue muſt be again melted in the ſame Pot they were melted in, if it be whole, or in ſome new Pot, and when they flow, put a live Coal into the Pot. The Salt-peter will ſeize upon the Coal, and being occupied about corroding the ſame, will let fall the remainder of the *Regulus* it as yet held up. Then the matters being poured out into your Cone, and cool, ſtrike off the *Regulus* at the bottom with the ſtroke of an hammer, and beat the *Scoria*'s which will be of a red colour and fiery taſt, into Powder, and being thus poudered let the Salts be extracted [or diſſolved] in the heat with common fair water; the which holding in them the moſt pure Sulphur of Antimony do turn the water into a red *Lixivium*, in which is hidden the Medicine that we ſeek after; and is to be gotten thence by the following way. For after that the Sulphur is diſſolved, by diſſolving all

all that will be ſeparated by the Salts or Lye, the Reliques or Remainder are good for nothing.

Having ſo done, diſſolve white and purified Tartar in fair water, in ſome glazed Pot, and thou ſhalt have an acid Solution; being thus hot as it is (for when 'tis cold the Tartar will again ſhoot in it) pour it by little and little into the Antimonial *Lixivium*, and it will debilitate the ſame, ſo that the Sulphur of the Antimony will fall down to the bottom in the form of a yellowiſh or reddiſh Powder When all the Sulphur is ſetled, ſeparate the clear Water of the Salt, from the Sulphur, by canting it off; then pour on ſome warm Water and waſh it ſo often till all the Salt be gone off. Then philter it, that all the Water may be ſeparated and the Powder ſtay in the Philter, which you ſhall put upon new and dry Cap-paper thereby to remove all the waterineſs, and then dry it in the heat of the Sun. This is that Univerſal purging Medicament which drives out all malignant humours by all the Emunctories, *viz.* by Vomit, Stool, Sweat, Urine, and Spittle, out of the whole Body; and that very ſafely if warily adminiſtred, and the Doſe thereof not too much encreaſed; in which caſe even the Galenical medicines themſelves do hurt, if their due Doſe be exceeded Hereupon it is better that there be uſed at the beginning rather a leſſer Doſe than too much, that ſo no errour may be committed, and a ſafe trial may be made, how much the ſtrength of the Patient will bear or not bear. And albeit that the Doſe of this medicament ſhould be given in ſo ſmall a Quantity as not to work, or have any viſible Operation at all, yet nevertheleſs it well performs its Office, and drives out the Diſtempers, but yet more ſlowly than when 'tis adminiſtred in a due Doſe, ſuch as may give about one, two, or three Stools. And to ſuch as are ſtrong and youthfull Perſons, the Doſe may be given in ſuch a Quantity as to cauſe Vomit, in ſuch I ſay as can brook vomiting. The uſual Doſe for thoſe that are above fifteen Years of Age is, one, two, three, four, or five Grains, according as they are older or younger. To Infants and ſuch as are a little elder an eighth part, a quarter, or half a Grain even to an whole Grain, may be adminiſtred, with regard had to the Age and the Diſeaſe. This medicine is of good uſe in all kinds of Diſeaſes, and in all kinds of Men, [and Women] ſave onely Women with Child; and to them you muſt adminiſter either none at all, or at leaſt wiſe ſo little as to be ſure it provokes not to any inclination of vomiting. And the like is to be obſerved by ſuch Perſons who are ſo weak, as that they clearly want ſtrength requiſite for this Operation [of vomiting.] But yet it may be uſed even to new born Infants, *viz.* for Convulſion Fits with which a great many of them are wont to be ſnatch'd away without any remedy. The Doſe muſt not exceed the bigneſs of a Rape-ſeed, and it muſt be adminiſtred in the Mothers milk. But if the Infants are grown already up to be ſomewhat ſtronger and are above half a Year old, the Doſe of the ſaid medicament is to be a little encreaſed, that it may operate viſibly, and ſo caſt forth all the malignant humours out of their Bodies; and they themſelves may not be afterwards afflicted with the Small-pox, and other ſuch like Diſeaſes as Infants are ſubject unto. Verily, all the Children whom I have given this medicine unto, have not hitherto taſted of thoſe Diſeaſes; the which truth the Parents of ſuch Infants and others can confirm by their Teſtimonies. But eſpecially this medicament is a moſt preſent remedy againſt the Epilepſie both in young and old, and a moſt certain Secret in the Plague and all Feavers; and a moſt excellent purge in the Gout, Leoproſie, French pox and other moſt grievous Diſeaſes; and likewiſe in external new Wounds, in Fiſtula's and old Ulcers, what Name ſoever they are called by, if it be but uſed inwardly to purge them. Briefly, this medicament hath ſcarce its fellow, ſo that we have no reaſon at all to regard ſuch men as out of meer ignorance, oppoſe and ſlander Antimony in their learned bawlings, and ſay that it is nothing elſe but Poiſon, and therefore no ways profitable. But let no body believe their barking, but firſt try the ſame, and he will clearly find the contrary.

This indeed I readily confeſs that Antimony is of no uſe in the body of man, nor can it be, afore it is prepared; but after preparation I do boldly affirm it to be a moſt admirable medicine.

Concerning which, reade but the chiefeſt of the Ancient Philoſophers, eſpecially *Baſil Valentine*, who in the honour of Antimony wrote the Triumphant Chariot [thereof.] Do but ſee what *Paracelſus*, *Alexander Suchten*, and ſeveral others have recorded in writing, concerning the incomparable Vertues and Power of Antimony; by all whoſe Writings is clearly evinced, what things lie hidden in Antimony, I forbear to ſpeak of other Phyſicians as well modern as ancient. For it poſſeſſeth the Vertues and Powers of all Vertues and Powers concentrated. What need many words? Let it be brought but to the Teſt, and it will moſt apparantly teſtifie by its trial, what Treaſures it carries in its boſom. The things that I ſpeak of here proceed out of meer pity and love to my Neighbour, that I might help his ſickneſs and miſeries. A very ſmall Portion of the ſaid medicament may be able not onely to preſerve a whole Family for a whole Year free from all the Diſeaſes that might befall them, but alſo to rid them of them. So likewiſe it ſends packing all the ſickneſſes of beaſts by its effectual Virtue. I was willing from a faithfull and good mind to beſtow this comfort and help upon mankind, againſt all incident Diſeaſes, whether external or internal; In the third following Century ſhall be deſcribed more very excellent medicines againſt all kinds of Diſeaſes, which may be made uſe of by ſuch as without cauſe are afraid of Antimony.

And as touching that Salt which is made by the mixtion of the acid Water of the Tartar, and the *Lixivium* made of the Tartar calcined; it is not inferiour as to its excellency and eminency to the but now ſpoken of Sulphur of the Antimony it ſelf; herein onely is the difference, that there is to be adminiſtred a bigger Doſe thereof. And therefore it muſt not be thrown away, but after that the Sulphur is ſeparated, the inſipid Water is to be evaporated, and there will then remain a yellow Salt behind, which has even yet in it no ſmall Portion of the Antimonial Sulphur; and therefore 'tis in a manner better than the Sulphur it ſelf, becauſe of its own peculiar Nature, which by the diſcharging its own office [or proper work,] may be even *per ſe* reckoned up amongſt thoſe moſt excellent medicines which ſtrongly reſiſt all Tartareous diſeaſes.

For that reaſon therefore do I commend this Salt moſt highly to all ſuch as are burdened with grievous Diſeaſes. The preparation thereof is altogether eaſie, for it is not made of any chargeable matters, but mean ones, and therefore not without cauſe to be highly eſteemed of.

The

The doſe of this ſo excellent a Salt is tobe encreaſed or diminiſhed according to the Quality of the Perſons and the Diſeaſes. To ſuch as are of ripe Age, one Scruple or ſomewhat more is ſufficient. To Infants, and to ſuch as are a little older, from one to twelve Grains may be given, regard being had to the difference of their Years. It gently purgeth the belly, without any kind of Danger, it draws out all evil humours, and eſpecially it helps the gouty and ſtony Perſons with a moſt wiſht for Eaſement.

The weight of thoſe two contrary Salts, *viz.* of the fixt Salt of Tartar by which the Sulphur is extracted out of the Antimony, and of the common and acid Tartar diſſolved in Water, and which precipitateth the Sulphur of the Antimony out of the *Lixivium*, cannot be certainly defined and limited. For according to the greater or leſſer Quantity of the *Lixivium*, is required more or leſs of the Tartar water to be poured upon the *Lixivium*, that ſo being mortified it may let go that Sulphur of Antimony it holds up in it ſelf. The *Lixivium* it ſelf will ſhew you if you have not poured on Water enough of the Tartar by its being not yet freed of all the Sulphur, and that there is more Water of Tartar required to allay all its Acrimony that all the whole Sulphur may be turned out. A bigger Quantity of the Water of Tartar poured on the *Lixivium* [than juſt enough] doth not ſpoil it; it takes in as much of the diſſolved Tartar as it can, and what is overplus remains an acid Tartar, and is not changed in its Nature. But whatever of it is diſſolved in the *Lixivium* is no more Tartar, becauſe it becomes a midling Salt of the two, neither acid nor ſweet, but partaking of both Natures, and diſſolves in cold Water, which the acid Tartar will not do.

This Salt therefore is able to perform great matters in medicine, and not onely in medicine but in Alchimy too, and in other Arts can it exhibit abundance of riches; concerning which thing, more ſhall be ſpoken in another place.

Thus finiſh I now this my ſecond Century, wherein I have not onely abundantly ſupplied thoſe things which by reaſon of the overmuch haſt, I could not inſert in the *Appendix* to the fifth Part of the Proſperity of *Germany*, but have withall laid open ſome part of the Uſe of my *Sal Mirabilis*, as much as the ſhortneſs of my time would give me leave to do.

If by the Grace of God I have a yet longer Life vouchſafed me, I will about half a Year hence, bring ſo great a benefit not onely unto my own Countrey, but perhaps even to the whole Chriſtian World, as ever they received from any man, in ſo much that the World ſhall ſeem as if 'twere new, and ſo for the preſent I reſt and make an End.

The Third Century
OF
GLAUBER'S
Wealthy Stoze-houſe of Treaſures.

Wherein many Profitable Chymical Secrets are diſcovered.

Faithfully tranſlated out of the High-Dutch of the Authour.

Courteous Reader,

HAving ſome Years ſince begun to communicate to the World my manifold profitable Inventions in Centuries, but of late been hindred by ſickneſs and other impediments from continuing the ſame: yet now being ſollicited thereto by many Lovers of Art, I could do no leſs than to endeavour to give them ſome ſatisfaction by the publiſhing of theſe; and withall aſſuring them, that, in caſe God be pleaſed to continue my Life (notwithſtanding that becauſe of great Age and Sickneſs I am fain to keep my bed) I intend to compleat the reſt of my promiſed Centuries, deſiring the kind Reader in the mean time to accept of theſe three, and to pardon the confuſed manner of writing them, having for want of leiſure, ſet them down as I found them in my Notes, being chiefly the occaſional diſcoveries and inventions during my Chymical Labours. Neither would I have the Reader offended that in ſome places I break off ſo abruptly, eſpecially where I am ſpeaking of the matter which Adam *brought with him out of Paradiſe, for whatever may be wanting in this fifth Century ſhall God willing be ſupplied in the ſixth: I alſo deſire the Reader not to be moved by the Calumnies of any Envious ignorant Perſons, to think that the things here ſet down (being moſt of them new and unheard of inventions) are mere Fables and invented matters, and no real experimented Truths, but rather remit the verification of them to time and his own Experience, which will not fail to ſatisfie him of the Truth of the Particulars herein contained. Farewel.*

THE THIRD CENTURY.

1. TO waſh common Tartar Snow white in a few hours time, and reduce it to a pleaſant Salt which diſſolves in cold Water, and wherewith of Sugar, Honey, or any ſweet Fruits at all times, yea all hours of the day, and in all places Liquors may be prepared like to Wine in Taſt, ſmell, colour, ſtrength and virtue, and of which afterwards good Brandy and Vinegar may be made with great profit.

2. To purifie common Salt in great quantity, in one days time, ſo as to become very white, pure and tranſparent and of a pleaſant Taſt, ſhooting into cubical Cryſtals fit for the Tables of great Perſons, its taſt being very agreeable, and the meat ſeaſon'd with it much more wholſome than that which is dreſt with the common Salt. *See the Treatiſe of the nature of Salts.*

3. A ſecret to preſerve all ſorts of Wine, and make them durable, whether of Grapes, Sugar, Honey, Apples, Pears, Quinces, Figs, Plums, Cheries, Malt, Wheat, *&c.* and is of great uſe to a Houſe-keeper.

4. Any of the forementioned Wines may with eaſe be turned into very good Vinegar, not inferiour to that which is made of French or Rheniſh Wine. *See my Vegetable Work.*

5. To make good *Sal Armoniack* of ſeveral contemptible matters which are trod under foot and caſt out on the Dunghill very eaſily and in great quantities, ſo as one Man every day may prepare one hundred pound weight of it with ten ſhillings charges. *See my Treatiſe of the Mineral Squill in order to long life.*

6. A ſecret water wherewith in an hours time the yellow colour in Diamonds may be drawn from them, which makes them ten times more worth than they were before. *See my Treatiſe of the Divine Character.*

7. In like manner may the dark red colour of Granates be extracted, leaving them onely ſo much colour as makes them like Rubies. For Granates and Rubies reſemble each other in their bodies and colour, the onely difference between them being, that the Granates abound with too much colour, which makes them leſs valued, when therefore ſome part of their colour is extracted from them, they do in virtue, hardneſs and beauty, equal Rubies, one Karat of which is more worth than ten pound of Granates, ſo as this extraction muſt be very gainfull to him that is Maſter of it. *See my third Appendix to the ſeventh part of my* Pharmacopœa Spagyrica.

8. In like manner alſo may be extracted the colours of blue Saphyrs, yellow Jacinths, Topaces, and Purple Amethyſts, by which means they become white as Diamonds, and when brought to the ſame degree of hardneſs are every whit as valuable as they. *See my third Appendix as before.*

9. In a moments time to rob *Sol* of its colour and make it white as Silver. *See my Treatiſe of the Seal of God.*

10. To ſeparate from *Mars* and *Venus* when diſſolved in Water as well as from any other Vitriol, by means of an artificial Precipitation, their hidden ſpiritual *Sol* or Tincture, and that in a moment; a thing of great uſe in Phyſick, as well as in the tranſmutation of Metals. *See the ſecond Appendix.*

11. To extract *Sol* out of Sand and Stones with great eaſe and little charges, which by precipitation is afterwards ſeparated from the diſſolvent, retaining its former ſtrength, and may be made uſe of again for the like extraction. *See the proſperity of* Germany *the ſeventh part, or* Novum Lumen Chymicum.

12. To extract *Sol* from *Luna* with a ſmall quantity of diſſolvent, which, after precipitation of the *Sol*, remains in its full ſtrength, and may be uſed as before to the great gain of the Artiſt. *See* Glauber's *Laboratory, and proſperity of* Germany, *7th. part.*

13. In one days time to prepare a particular, whereof one part will tinge three parts of *Venus* into *Lune*. *N. B.* This Tincture is a white Stone which being placed in a fit Furnace, and a due fire adminiſtred, within few days the whiteneſs will be changed to a yellow colour, and that into a fix'd red, whereof one part being caſt upon four parts of *Lune* in Flux, exalts it ſo far that in the ſeparation it gives a fourth part of *Sol*. Which ſudden fixation is performed by the proper Agent of the matter which is white of it ſelf, and yet affords a red Tincture, when handled, as is here ſet down. *See my Treatiſe of the ſecret fire of* Artephius.

14. In a ſhort time to prepare a particular Tincture of a red ſubject, which exalts Silver to that degree, as to yield much *Sol* in the ſeparation. *See my explication upon* Pontanus *his Letter.*

15. A good graduating water which being digeſted with *Lune*, makes it yield much *Sol* in ſeparation. *See the Treatiſe concerning the moſt ſecret natural Sal Armoniack every where to be found.*

16. Another graduating water in which Mercury being digeſted, becomes coagulated into *Sol* and *Luna*. *See the fiery Alkaheſt.*

17. Another fixing water, which being once or twice abſtracted from Mercury makes it loſe its property of making *Sol* and *Venus* white, and on the contrary gilds *Luna* when rub'd upon it. I have as yet carried this experiment no further, but am of opinion that if Mercury were long enough digeſted in the ſame, it would turn the Mercury into Tincture, coagulating and fixing each common *Mercury* into *Sol*. *See Haſtecal.*

18. A volatilizing Water which being abſtracted from *Sol* highly exalts its natural colour, and carries it over the Helm, which done it is no more common *Sol*, but may in a ſhort time be fixed into a tranſparent red Carbuncle. *See my third Appendix, &c.* concerning the Griffins Claws, and Eagles Wings.

19. A water of like nature that volatilizeth all fixt matters, wherewith in one ſingle Diſtillation, the Tincture or Soul may be extracted from *Mars*, *Venus*, and all coloured Stones, and carried over the Helm; which Tinctures afterwards with one rectification are highly purified, and have their Medicinal and tinging virtue doubled, which exalted and multiplied Tinctures, notwithſtanding their great volatility may within twenty four hours time be concentrated, by means of a ſecret Magnet, and fixed into a Stone, penetrating all compact Bodies, with which incredible things may be done in Alchymy and Phyſick. *See my third Appendix, &c.*

20. To prepare a Salt in an hours time, and without extraordinary charges, which makes all fixt matters

ters volatile, and is of ſuch virtue that when a little of it is joyned with Spirit of Wine it makes it ſo ſtrong and fiery, that it diſſolves all Metals, Minerals, Animals and Vegetables, carrying their Q. Eſſence over the Helm, and is the effecter of wonders in Phyſick and Alchymy: ſo that he who knows how to prepare and make uſe of this wonderfull Salt, needs never want either bodily health, or a competent ſupply of maintenance. *See my Treatiſe of* Elias Artiſta *in Quarto.*

21. A wonderfull, to all Men known, but withall contemptible matter, which every where may be had for nothing, which whoſoever knows, together with the uſe of it, needs never want, becauſe thereby he may effect whatſoever is neceſſary for Soul or Body. *See my firſt, ſecond and third Appendix of* Pharmacopœa Spagyrica.

22. The manner of preparing a running Mercury out of all Minerals and Metals, and that in one days time, which joyn'd with *Sol* becomes fixed into *Sol*. *See my third Appendix.*

23. How ſuch a Mercury may be prepared in an hours time of the martial *Regulus* of Antimony, without any charges to ſpeak of, which is a true Tincture, fixing the imperfect Metals into *Sol*. *See my Treatiſe concerning the ſecret Fire of the* Magi.

24. A water made of a particular ſort of Chalk which changeth a yellow or brown skin into white, and which cannot be waſh'd off with water, of valuable uſe for Ladies and Gentlewomen. *See my 4th. Century in* Folio.

25. A water prepar'd of *Sol*, which turns white hairs into a yellow gold colour. *See my Laboratory.*

26. Another water made of Silver, which tinges hair cole-black, good for ſuch as are gray hair'd, and endeavour to conceal their Age. *See* Glaub. *Concentrate.*

27. A water made of *Sol*, which colours the hair and skin of Man, as alſo the bones and horns of Beaſt, and feathers of Birds, of a fair laſting Purple. *See* Glauber's *Laboratory in* Quarto.

28. A water into which when any Metal is put, it begins to grow within twenty four hours time in the form of Plants and Trees, each Metal according to its inmoſt colour and property, which Metalline Vegetations are called Philoſophical Trees, both pleaſant to the Eye and of good uſe. Vide *my fourth Century.*

29. A water made of Sand and Flints, having the property of changing Wood that is laid in it, in a ſhort time into hard Stone of ſeveral colours according to the pleaſure of the Artiſt.

30. A dry water, or rather Stone, upon which if any volatile ſaline Spirit be poured and ſet in the Sun, it preſently ſucks in the volatile mineral Spirit and in one days time makes it ſo fixt that it may be made red hot in the Fire, without any evaporation. *See my univerſal Coagulator.*

31. By this means alſo may the combuſtible ſtinking Sulphur, the greateſt enemy of Metals be fixed, which afterwards being caſt upon the imperfect Metals in Flux, doth meliorate them, and make them afford *Sol* and *Luna* on the Cupel with profit. *See my ſecond Appendix.*

32. In like manner may Antimony without any loſs of weight be fixed, ſo as no more to cauſe vomiting, but caſts all evil out of the Body inſenſibly by ſweat, reſtoring health, and renewing youth. *See my proper Agent.*

33. In the ſame manner may Orpiment be fixed, ſo as no longer to be a Poiſon, but a Meliorator of imperfect Metals.

34. Likewiſe alſo may Arſenick be fixed within two or three days time, ſo as it may ſafely be taken inwardly, being an excellent Diaphoretick for the cure of Diſeaſes, and good to exalt Metals, ſo that in ſeparation they afford Gold and *Lune*. *See my proper Agent.*

35. Much after the ſame manner may Mercury, without any conſiderable loſs of weight (though with longer time and more patience) be fixed, ſo as to ſuffer himſelf to be melted and hammer'd like any other Metal, and on the Cupel leaves *Sol* and *Luna*. *See my Treatiſe of the univerſal Coagulator.*

36. In like manner may the martial *Regulus* of Antimony be fixed into a tinging Stone, that meliorates all imperfect metals.

37. A wonderfull Magnet which being put into any watry Liquors or Oils, draws the water to it ſelf leaving the Oils more pure, ſubtile and penetrating. *See* Elias Artiſta.

38. By means of this Magnet, we can ſeparate from the higheſt rectified Spirit of Wine, one half of inſipid water, which Spirt of Wine after this ſeparation is an effecter of wonders.

39. This Spirit of Wine when poured on pulveriſed Coral and thence abſtracted, brings their red Tincture over the Helm, being a wonderfull Cordial and purifier of the Blood.

40. By means of this Spirit of Wine, may the Cordial Virtue of Pearls be brought over the Helm, being of great efficacy for the recovery of ſick and weak Perſons.

41. This Q. Eſſence of Wine being poured upon clean waſhed Egg ſhells, diſſolves them, and diſtilled from them, brings over with it their Stone-breaking and diſſolving virtue, and is a ſingular remedy in the Gout, and the Stone of Kidney or Bladder.

42. The ſame alſo diſſolves the *Lapis Lyncis* and *Judaicus*, as alſo Crabs Eyes ſo called, and other Stones found in Fiſhes, carrying their virtues with it over the Helm. *See my fifth Century.*

43. The ſame Spirit of Wine diſſolves, extracts and brings over the Helm, the inmoſt virtues of all Animals and Vegetables carrying them over the Helm, whence incomparable medicaments may be prepared.

44. Black Snails ſuch as are found in *May* on the Graſs diſſolved in the ſame, and brought over the Helm, and duely exhibited to thoſe that have the Gout or Stone, carries off all tartareous ſlimy matter from the Kidneys, Bladder, and other parts of the Body by Seige and Urine.

45. Aloes, Saffron and Myrrh diſſolved in the ſame, and their Tinctures carried over the Helm, affords an excellent *Elixir Proprietatis*, very conducive to long Life. *See* Paracelſus *concerning* Elixirs.

46. Cantharides diſſolved therewith, and brought over, are a powerfull Diaphoretick, above all others, cleanſing the Kidneys and Bladder, but ought to be heedfully uſed, becauſe it is a vehement Medicine, which being overdos'd will hurt the Kidneys, Bladder and Ureters.

47. The Leaves of Helleborafter, extracted and brought over with the ſame, affords an Excellent *Aqua Vitæ*, conducing to long Life. *See Paracelſus.*

48. Sea Squills being diſſolved in this Spirit of Wine, and ſpiritualized by being brought over the helm, is of great uſe for removing of Diſeaſes, and maintaining of health.

49. *Nux Vomica*, being firſt grated and then diſſolved therein, and their reſtorating Vertue being brought

brought over the Helm, doth wonders in reſtoring the decayed ſtrength and health of man, but muſt be uſed with underſtanding.

50. Common Mercury diſſolved and brought over with the ſame, is the higheſt Medicine againſt the French Pox and all venereal Diſeaſes.

51. Mercury of Antimony prepared after the ſame manner, affords a Medicine againſt all Diſeaſes of mankind.

52. Fixed Antimony thus extracted and brought over is a Diaphoretick curing all Diſeaſes, and reſtoring the higheſt degree of health.

53. In like manner may many excellent Remedies be prepared, out of all Vegetables and Minerals, for reſtoring and preſerving of health.

54. A further uſe of our Water attracting Magnet is this. Abſtract the Oil of Tartar, Hartshorn, Amber, Soot, or that which is diſtill'd from Smiths Coals, and the Magnet will attract all the Water and bad Smell to it ſelf, which remains with the Magnet, and the pure clear and ſubtil Oil, onely comes over, which Magnet being made red hot, loſeth its water and ſtink and may be made uſe of as before.

55. In like manner may the Oil of Wax and Bricks, commonly called the Oil of Philoſophers, be deprived of their bad Scents, and made exceeding penetrative and pleaſant.

56. So alſo may all Vegetable and Animal Oils diſtill'd by retort, be purified and made pleaſant.

57. Likewiſe all the Oils of Herbs, Seeds, Woods and Spices, which with the addition of Water are diſtill'd by a common Still, may by diſtilling them from our Magnet be made much more ſubtil, and their ſweet Smells much more ſtrong and piercing; ſo that a little of theſe Oils ſet in an open Veſſel, perfumes not onely the Room in which it is but alſo the whole houſe, they being ſo volatile that without any Fire they vaniſh in the Air.

58. And as by means of this volatalizing fiery Spirit, the pleaſant and well ſcented Oils of Spices may be greatly meliorated and exalted; ſo likewiſe may all ſtinking and poiſonous Vegetables, Animals or Minerals, thereby be made much more ſtinking and venemous, ſo as their Smell alone will be ſufficient to kill men, doing it with far greater expedition than any Corporal poiſons whatſoever. See *Elias Artiſta*.

59. All well ſcented Oils, may by means of our volatile ſaline Spirit, be purified to the higheſt Degree, and afterwards be reduced to a hard Body: which Body then is no common groſs Body (as being a coagulated Spirit) but a clear, tranſparent ſpiritual pure Body.

60. This Labour may with profit be practis'd on Amber, whoſe Oil being by rectification made clear and tranſparent, and then digeſted with our fiery ſalt Spirit, becomes hard again as it was before diſtillation; by which means we may make pieces of Amber as big as we pleaſe, and may mix with it ſome ſmall Threds of *Sol*, and ſo ſhall have the old highly eſteemed Stone called Chryſophoros; or elſe we may put into it, whilſt yet it is ſoft, little Worms, Flies, Spiders, Piſmires, or whatever elſe we pleaſe, which is a notable Curioſity and ſhews as if they were grown there, to thoſe that are ignorant of this Art.

61. In the ſame manner may the Oil of Turpentine be reduced to a hard Gum, to very good uſe and purpoſe.

62. All diſtilled Oils of Seeds, Woods and Spices, when by long ſtanding, they turn yellow, red or thick, may by means of this fiery ſalt Spirit be again made clear, thin and tranſparent, when ſome of the ſaid Spirit is poured on the ſaid Oils and ſo diſtilled, ſome part of the Oil comes over clear and tranſparent, the other part remaining in the Glaſs, in the form of an hard Gum, in which ſmall Inſects may be incloſed as before ſaid of the Amber.

63. Amongſt all Oils theſe following are apt to grow thick and ropy, *viz.* the Oils of *Lignum Rhodii*, Oranges, Limmons, Juniper-berries; thoſe of Cloves and Cinamon are apt to grow red. The Oils of Fennel-ſeed, Anniſs, Coriander, Caroway and Cumin-ſeed, and all other Oils diſtill'd from Herbs and Seeds, that have hollow Stalks, and are umbelliferous, foraſmuch as they abound with much volatile Salt, are apt to turn thick: If any of theſe be rectified with an acid ſaline Spirit, it immediately deſtroys the volatile Salt, and the Oil becomes clear and tranſparent, and the remaining part of the Oil becomes hard as a Gum, and is a ſpecial inward and outward Medicine.

64. And foraſmuch as a fiery ſaline Spirit can make old and red Oils clear, thin and tranſparent, we may conclude, that ſuch a Spirit is able alſo to volatilize and bring over by diſtillation thoſe Oils which by length of time are become hard and dry in Seeds, Herbs and Woods, and cannot by maceration in water be brought over, but muſt by this more powerfull means be made thin and volatile, that they may afford their Oils as eaſily in diſtillation, as green Seeds and Woods are uſed to do.

65. Now as thick and ropy diſtill'd Oils may be made thin, by means of ſaline Spirits; ſo there are ſome ſalt Spirits wherewith we can coagulate all thin and ſubtil Oils, in the form of a volatile pleaſant ſtrong ſcented Salt, of great uſe in Phyſick.

66. In this manner, *viz.* by pouring a ſtrong ſaline Spirit upon them, we can diſtill ſubtil and powerfull Oils from all roſins, gums and thick juices, and afterwards reduce them again to the hardneſs of Amber.

Thus Maſtick, Frankincenſe, Benzoin, Storax, Camphir, *&c.* afford very pure clear and tranſparent Oils, which when hardned to the conſiſtence of Amber, draw ſtraws and other light matters to them like it.

67. In like manner alſo can all ſulphureous Minerals be purified to the higheſt degree, when diſtill'd with ſuch a Spirit, and then may be reduced again to hard tranſparent clarified Bodies: and amongſt the reſt Antimony and Orpiment do afford in this way moſt powerfull and ſuperlatively penetrating medicinal Stones.

68. And as theſe fiery ſaline Spirits do bring over by diſtillation all unfixt ſulphureous Subjects, and purifie them; ſo they do the ſame in fixt Sulphureous Metals, Eg. *Mars* and *Venus*, which Metals being thus purified may be fixed into tinging medicinal Stones.

69. They who know the art of the metallick purification and fixation, are poſſeſſours of an incomparable Treaſure, foraſmuch as by this means in three days time with the charge of one Crown, a true univerſal Medicine may be prepared, for the Bodies of men and metals, not in great quantity indeed but ſufficient to aſſure the Poſſibility of it, and may afterwards be tryed in greater quantity.

70. By means of ſuch a fiery ſalt Spirit fixt Chryſtals, Flints, and other hard Stones may be made volatile and ſpiritual, and then may tinge them with what

what colours we pleaſe, and coagulate them again into hard tranſparent colour'd Stones, and that of what form and faſhion we pleaſe. This is a very gainfull Art, becauſe fair tranſparent colour'd Stones are always preferrable to *Sol*.

71. And as we have underſtood that by means of volatilizing waters, not onely Vegetables and Animals, but alſo minerals and fixt metals may be made volatile, and their pureſt parts brought over the Helm, and by this means do wonders as well in Phyſick as Alchymy. Now though this ſeparation of the pure part from the impure, by means of Diſtillation be highly to be valued, yet there is a better, eaſier and leſs chargeable way to ſeparate the purer parts from all Metals, Minerals, Stones, Sand, and coloured Earths containing *Sol* and Tincture, by means of a Magnet, which being laid in the Solutions of Metals, and extractions of Stones, within a few hours time draws to it all the ſpiritual as well as fixt *Sol* and Tincture contain'd in the ſaid Solutions; ſo that after abſtraction of the diſſolvent by Diſtillation, we find the diſ-animated dead Body, which being put aſide, we ſeparate the attracted *Sol* or Tincture from the Magnet, and thus obtain whatſoever good was hid in the foreſaid groſs Bodies. *N. B.* Though indeed this extraction of *Sol* and Tinctures be very eaſie, as hath been ſaid, yet I ſhall here, for further information of the Reader, ſet down what ought to be obſerved in the extracting of *Sol* from each Metal, Mineral, Stone, or Earth. And firſt of fixt *Sol*.

72. When there is fixt *Sol* in Sand or Stones, we need onely to pulverize them, and pour upon them *Aq. Regis* wherein common Salt hath been diſſolved, and let them boil together a quarter of an hour, by which means the *Aq. Regis* draws the *Sol* out of the Sand and Stones, in which extraction if we then put the *Sol* attracting Magnet, it will draw the *Sol* to it ſelf, which being ſeparated from the Magnet, is melted down with fluxing Powder, the *Aq. Regis* continuing good to be employed on the like occaſion.

73. But when in the Sand or Stones there is no fixt but onely a volatile unripe *Sol*, then we muſt put the Sand or pulverized Stones into a Glaſs Retort, and pour upon them of our volatilizing fiery Alkaheſt, and abſtract the ſame from the Sand or Stone, by which means it carries the *Sol* over with it, which hath been attracted by the golden Magnet, which being reduced will be found good and fix'd *Sol*. The diſſolvent may again be uſed to the ſame purpoſe.

74. But if the Stones beſides the *Sol*, do alſo contain *Lune*, then an *Aq. Fortis* muſt firſt be poured upon them to extract the *Lune*, and afterwards precipitate it by caſting ſome common Salt into the Solution, by which addition of Salt the *Aq. Fortis* is turned into an *Aq. Regis*, and being poured upon the Stones, it extracts the *Sol* alſo.

75. For if at firſt we ſhould pour an *Aq. Regis* upon theſe Stones, it would indeed extract the *Sol*, but withall ſo alter the *Lune*, that it would be impoſſible afterwards to extract it with *Aq. Fortis*, and therefore we are to proceed in the manner aboveſaid.

76 In like manner alſo we are to proceed with white, yellow and red Earths, for to extract the *Lune* and *Sol* that is in them. And if it be a fat Earth and contains fix'd *Sol*, it muſt firſt be made red hot to rob it of its fatneſs, becauſe elſe it would devour too much *Aq. Fortis*.

77. But when the Earth contains onely volatile *Sol*, as the yellow Earth of *Sileſia* and the red *Terra Lemnia Sigillata*, it muſt not be made red hot, but pour ſome Alkaheſt upon it, and ſo bring the *Sol* over the Helm.

78. Yellow and red Earths do commonly contain *Sol* or *Lune* or both, and therefore we may boldly make trial of them; for oftentimes a great treaſure is ſhut up in very contemptible Earth, ſuch as might ſerve to maintain many thouſands.

79. In the ſame manner we may extract the fixt as well as immature *Sol* out of Ruddle, red Jaſper, and red Blood-ſtones, which in ſome parts are found in great quantities.

80. With our *Sol* attracting Magnet, we can extract much *Sol* out of any common Vitriol, and after the *Sol* is extracted, reduce the Solution to Vitriol again, which is as good for the Dyers uſe as it was before.

81. With the ſame Magnet, good *Sol* may be extracted out of thoſe yellowiſh, reddiſh, and greeniſh waters which flow from ſome Mountains, which waters being to be had for nothing, muſt make this work very gainfull.

82. And in caſe we ſhould not be able to meet with this ſort of running waters, then we may take the Copperas Stones which are often found in Sand, but for the moſt part grow in fat Earth, which when they are expos'd to the Air, fall in pieces, and having water poured upon them afford a good Vitriol, which eaſily yields the ſpiritual *Sol* it contains to our Magnet. So that an Artiſt can ſcarcely be to ſeek for ſubjects, from whence unripe volatile or fixt *Sol* may be had with profit.

83. *N. B.* But when we have a mind to bring the volatile *Sol* which is in red Sand, Stones and Clay, with volatilizng waters by Diſtillation over the Helm, it is good to add to our Eagles Wings, or volatilizing water, ſome of our moſt ſecret *Sal Armoniack*, by which the ſame is extreamly ſtrengthned and animated, ſo that like a *Griffin* for ſtrength, it carries the Man on Horſeback away in the Air to his Neſt.

84. *N. B.* This *Griffin* is the Artiſt, that prepares this fiery water, wherewith he ſeizeth as with his Talons the Man armed Cap a Pe; that is, red Stones, Sand and Earth, abounding with a martial Tincture, extracts and carries them to the young ones in his Neſt, that is, provides a good maintenance for his Family thereby.

85. But becauſe to theſe operations of extracting *Sol* volatile and fixt, and Tinctures from the ſubjects juſt now mentioned, when we work them in quantities, much *Aq. Regis*, or other like waters are required, which every one hath not an oportunity to prepare for himſelf, and therefore muſt buy them, which encreaſeth the charges of the operation; wherefore I am willing to teach a near way to prepare theſe corroſive waters.

86. Foraſmuch then as we know that Vitriol is an univerſal acid, and the chief of all Salts, and the Spirit it yields by Diſtillation, much more fiery than that which is forc'd from other Salts, therefore we may make uſe of the Oil of Vitriol, for a *Baſis* with the help of others Salts, to prepare ſeveral ſorts of ſaline Spirits, with ſmall labour and charges, in manner as follows.

87. *Recipe* two parts of Niter diſſolved in water and one part of Oil of Vitriol, diſtill them in an Allembick, and you will obtain a good *Aq. Fortis* to diſſolve *Lune*, *Saturn*, and *Mercury*. This operation ſpends little Fire and comes over eaſily.

88. And if we diſſolve one pound of Salt, and as much Niter in three pound of Water, adding thereto one pound of Oil of Vitriol, and diſtill it in Sand, by Alembick or Retott we ſhall get ſix pound of good and ſtrong *Aq. Regis* to diſſolve *Sol*, *Venus*, *Mars* and *Jupiter*.

89. But when we take two pound of Salt, and diſſolve it in three pound of Water adding one pound of Oil of Vitriol, we get five pound of good Spirit of Salt. The Salt that ſtays behind is called *Sal Mirabilis* or wonderfull Salt, becauſe wonders may be done with it, as appears from ſeveral parts of my Writings, theſe Salts being of divers vertues according to the nature of thoſe Salts that are added to the Oil of Vitriol in Diſtillation.

90. Theſe Salts are commonly added to metals, and melted down with them in Crucibles, by which means they become diſſolved in the dry way, which is much eaſier and readier than the wet way of diſſolving.

91. In particular by this way we can diſſolve Sulphur, which reſiſts all corroſive ſaline Spirits, and remains undiſſolved by them.

92. Now to obtain Oil of Vitriol with eaſe and in great quantity, we may proceed ſeveral ways, and eſpecially thus, by diſſolving Vitriol in water, adding a contrary to it, which ſeparates all its impurities, by which means the purified Vitriol may with a ſmall Fire be reduced to Oil, ſo as one pound of Oil of Vitriol will not require above ten pound of Coals.

93. And becauſe Oil of Sulphur is of the ſame nature with Oil of Vitriol, yea is more proper for ſome operations than it, therefore we may make uſe of the ſame Oil of Sulphur, to prepare ſtrong ſaline Spirits, eſpecially becauſe the ſame may be prepared in quantity and very compendiouſly, according to a particular way deſcribed by the Ancient Philoſophers.

94. They have taught us the preparation of Oil of Sulphur in their wittily deviſed Fables, giving to this Oil the name of *Venus*, whom *Vulcan* when come to Man's eſtate took to Wife: by the word *Vulcan*, we are to underſtand every combuſtible Sulphur, and by the word *Venus*, its incombuſtible corroſive Oil, which for this reaſon probably they called *Venus*, becauſe when a drop of it falls on burning Coals, it gives forth a red ſmoak like to *Venus*, or becauſe this acid Oil like a wicked Woman, has ſharp Teeth, and a keen deceitfull Tongue, wherewith they lay hold of Men, and lead them aſtray in the ſame manner as this Oil cleaves to, and enters a League with every metal to which it is joyned, foraſmuch as all metals proceed from Sulphur, and have great affinity with it, as the Woman hath with Man.

Here follows an Explication of the Poetical Table, teaching us to make the Oil of Sulphur in quantity.

95. We reade that *Vulcan*, that is, a combuſtible Sulphur, took *Venus* to Wife, by which is meant the incombuſtible Oil of Sulphur; now whilſt *Vulcan* was buſie at his work in the Caves of the Earth, for he was a Miner and a Black-ſmith, *Venus* betakes her ſelf to *Mars*, who lies with her; now when *Vulcan* found his Wife in the embraces of another Man, he calls all the Gods to his help, who appearing, caſt an Iron Net over *Mars* and *Venus* that they might not eſcape, but with great ſhame be expoſed to the deriſion of the Gods.

96. When *Vulcan* is kindled in a Furnace made for that purpoſe, that is, labours in metals, the flame carries *Venus*, i. e. the Oil of Sulphur into *Mars* his lodging, that is, into the Recipient, which muſt be fill'd with Steel Wire, where ſhe commits Adultery with *Mars*, that is, begins to diſſolve the ſame, and produceth a Vitriol, which when expoſed to the moiſt Air, becomes reſolved into a clear ſweet water, which from the Steel Wire runs into the Veſſel appointed to recieve it, which ſweet water is nothing elſe but *Aroſtrus* the Son of *Mars* and *Venus*, or the martial Oil of Sulphur, or to ſpeak more plainly, the Vitriol of *Mars*.

97. This Vitriol of *Mars* is called by the Philoſophers the juice or water of the Birch Tree, and of which they ſay the Philoſophers Stone may be prepared, for many of them have writ concerning it, and pointed to this ſweet Iron Juice, which they have termed Birch Tree Waters, becauſe of the likeneſs it has therewith, for when in the Spring-time we make a hole with a Piercer, reaching to the Pith of the Tree, and thruſt into it a Quill or Faucet, much ſweet water proceeds from it, which ſome make uſe of to brew Beer, becauſe the ſame is accounted very good againſt the Stone in the Kidneys and Bladder.

98. This Vitriol alſo is *Virgil's Arbor Opaca*, or dark Tree, whoſe Branches he declares to be eaſily flexible; now what is more flexible than Iron, or Copper Wire, which are therefore compared to the Birch, which is a very juicy Tree, and hath very flexible branches.

99. That this ſhady Tree is the fitteſt, according to *Virgil's* Doctrine, to break off one golden Twig after another is alſo certain, for I have tried it divers ways and found it to be true, that it affords its golden Twigs very freely to him that knows how to handle *Proſerpina*.

100. But if the Artiſt be acquainted with the uſe of our *Sol* attracting Magnet, he may then with eaſe and more profit, without Diſtillation or Fire, break off the ſaid Twigs, than he could do with the help of *Proſerpina*.

And thus I conclude this third Century, the fourth and fifth follows, which will be found of better uſe than this.

THE

THE FOURTH CENTURY.

To extract the Sol *that is in Granates.*

1. IF Granates be melted with Glaſs, that contains *Lune*, the *Lune* containing Glaſs will unite it ſelf with the *Sol* that is in the Granates, which with an *Aq. Regia* may be afterwards ſeparated.

To make a good Mercury *of Wine.*

2. *Recipe* Crude Tartar and pour upon it a Lye of Salt of Tartar, diſtill in an Alembick, and you'l have a ſtrong Mercury of Wine, which is a much ſtronger and more fiery Spirit, than Spirit of Urine, eſpecially if ſome *Sal Armoniack* be added to it.

To make a Mercury of Metals.

3. And if before we diſſolve a Metal or Mineral in the foreſaid lye of Salt of Tartar, or in the Crude Tartar, before that both theſe contraries be put together, then the volatile Spirit of Tartar will bring over the Tincture or Mercury of the ſaid metal or mineral in the form of a ſubtile Spirit. In this manner we may drive the Mercury of all minerals and metals over the Helm.

What the Soul of the greater and leſſer World is.

4. *Plato* call'd common Salt the Soul of the great World, and if ſo, then Salt of Tartar may very well be accounted the Soul of the leſſer World: for whatſoever is in the Macrocoſm, the ſame is alſo in the Microcoſm.

All ſuperfluities of Nature afford a volatile Salt.

5. For the Salt of Hartſhorn of Hair, Soot, Blood, and of the Seeds of Muſtard, Creſſes and Scurvygraſs, *&c.* are much of the ſame Nature as *Salt* of Tartar.

A Good Bath.

6. Common water ſprinkled upon red hot Flints or Pebbles that are found in running Streams, affords an hot Vapour, which by reaſon of the ſubtil Sulphur of the Stones it carries up with it, is very penetrating, ſo that in this manner without any other Fire we may prepare an hot dry Bath, very available to cure many Diſeaſes by ſweating, the great vertue of it chiefly proceeding from the ſulphureous Spirit of the Stones.

To ſeparate Sol *from* Luna *by fluxing in a Crucible.*

7. When we have a mind to ſeparate *Sol* from *Luna* by means of Sulphur we need not make uſe of granulated or filed *Saturn* for precipitation, but inſtead thereof we may make uſe of Antimony, becauſe the granulated or filed *Saturn* is made hard and influxible by the Sulphur: neither ſhall we make uſe of common *Venus* for precipitation, as *Erker* teaches, but ſuch a *Venus* as hath been made friable with Arſenick or Orpiment, by which means we ſhall get more *Sol* than without Arſenick, becauſe Arſenick and Orpiment contain much volatile *Sol*, which in this Operation becomes fixed with the *Luna*.

To recover the Sol *and* Luna *which is got into the Pores of the Crucible.*

8. The Crucible muſt be beaten into fine Powder, and put into a reverberatory fire, ſtirring it continually by which means the Antimony and Sulphur vapour away, and the *Sol* and *Luna* remains with the Earth, which, with ſtrong Waters may be ſeparated.

Another way to perform the ſame.

9. Or we may add filings of *Saturn* to the powder of the Crucibles, and give them a ſtrong heat, by which means the *Saturn* will take in the *Sol* and *Luna*. *N. B.* But the Separation with ſtrong Waters is the more eaſie way of the two.

To extract the Colour from Sol.

10. *Venus*, *Jupiter* and *Regulus Martis* melted into a maſs with *Sol*, and *Venus*, the *Jupiter* and *Regulus Martis* afterwards ſeparated from the *Sol* by *Niter*, then melt other metals as before with the *Sol*, and ſeparate them as before with Niter, which muſt be continued till the *Sol* have loſt his Colour.

11. The droſs being afterwards melted in a Crucible, and a ſmall quantity of Coles made of Blood caſt upon it, the extracted Tincture of *Sol* will ſeparate it ſelf from the droſs, falling to the bottom like a *Regulus*. *N. B.* The metals *Venus*, *Jupiter* and the martial *Regulus* may be ſeparated from the droſs onely with common wood Coal.

12. Niter fixed by the *Regulus* of Antimony, and diſtill'd with *Sal Armoniack*, gives an excellent *Mercury* of metals, which hath a ſcent like muſk.

To extract Sol *out of Stones.*

13. If we take Sand or Stones that contain *Sol*, and melt them with Lead aſhes into Glaſs, and reduce them again with fixed Salt, then by cupelling this Lead aſhes, and the reduced Sand or Stones ſeveraltimes, we ſhall have the *Sol* that was in the Stones.

To extract Sol *from Stones.*

14. The black or brown Pebbles found in Brooks, and which break ſmooth like Glaſs, being mixed with the beſt Eagles wings and diſtilled by retort, yield much *Sol*.

A Tincture from Metals.

15. *Jupiter* is the higheſt Regent over the upper Conſtellations. *Sol* gives to all Stars their Light, *Mars* rules upon Earth, and *Saturn* in the Earth, and of theſe four an univerſal Tincture may be prepared.

16. *Mars* and *Saturn* in particular yields great riches, when being reduced to Glaſs they are ſeveral times driven through a Reverberatory, according to that of the Ancient Philoſophers; by *Saturn* and *Mars*, fire and art, great wealth may be found.

That there is a renovating vertue hid in Spiders.

17. Spiders renew themſelves every month by caſting their skins, wherefore a medicine prepared of them by the Flame of Spirit of Wine renews man.

18. It

18. It is alſo to be obſerved that all Birds, eſpecially thoſe that feed upon Flies and Worms, when they are ſick, cure themſelves by eating Spiders.

Secrets of Serpents.

19. All ſorts of Serpents renovate themſelves once a year by caſting their skins, wherefore if we extract them with Spirit of Wine, and correct them by burning away the Spirit of Wine, they yield an aſſured medicine againſt all Poyſon, and renews man.

20. *Regulus* of Antimony being duely fixed with *Sol*, tingeth as well in the wet as dry way.

Sol *and Sulphur yield a Tincture.*

21. Common combuſtible Sulphur cannot join with the incombuſtible Sulphur of *Sol*, without ſuch a medium as partakes of both their Natures, *viz.* Antimony: when by this means the combuſtible Sulphur is fixed by the incombuſtible Sulphur of *Sol*, the *Sol* gives it ingreſs into imperfect metals to tinge them.

To make Sol *red.*

22. If the Blood of the Lion be digeſted with Tartar and *Aqua Fortis*, this purple Colour will be changed into a red, and ſeparate it ſelf from the Salt, falling in form of red powder to the bottom, and is a moſt excellent Colour for Painters.

To make Purpuriſſa, *or a Paint to make the Face look ruddy.*

23. Diſſolve *Sol* and *Jupiter* in *Aqua Regis*, digeſt and edulcorate with Water, yields an excellent paint for Women. *N. B.* But a little Oil of Talk ought to be added to it.

An Experiment upon Purpuriſſa *or the Blood of the Lyon.*

24. When we digeſt or boil the Blood of the Lion ſo long till the red Colour becomes as white as milk, and then pour upon it as much Water, as has been evaporated during the boiling, this milk will be chang'd again to Blood.

25. Of the blue Paint called Smalt, by means of Salt of Tartar may a moſt excellent Paint be made for Limners, not inferiour to Ultramarine.

26. Of *Mercury*, *Jupiter*, Sulphur and *Sal. Armoniack* is made the Paint called *Aurum Muſicum*.

A Cementation that graduates Venus *into* Sol.

27. *Recipe* Vitriol calcined to Redneſs, mix it with Salt and Coal duſt, lay this with thin Copper Plates *ſtratum ſuper ſtratum*, put them into a Fire that may keep the Plates of *Venus* red hot for ſix hours without melting them, by which means the *Sol* in the *Venus* will be encreaſed; if we repeat this Cementation ſeveral times till the *Venus* be of a golden colour, the gain will be much greater. *N. B.* The cauſe of this melioration is, becauſe the Coal Duſt hinders the corroſive Spirits of the Vitriol and Salt from corroding the *Venus*, and therefore onely penetrates and graduates the ſame.

To make all Corroſives ſweet.

28. Vitriol diſtilled with Salt yields a Corroſive Spirit, but if Coal Duſt be mixed with them, they give a ſweet Spirit, which graduates *Lune* into *Sol* when digeſted therein.

29. *Recipe*, *Calx* of *Jupiter* mixed with *Mercury* of *Lune*, and therewith Cement plates of *Venus*, by which means the ſaline Spirits introduce the white Sulphur of *Jupiter* into the *Venus*, and change it into *Lune* containing much *Sol*.

A ſweet graduating Spirit, uſefull to the Melioration of Metals.

30. *Recipe*, Coal Duſt, mix them with *Sal Mirabilis*, and diſtill by retort, and you will get a ſweet graduating Spirit, exalting ſome Metals to *Sol*.

The Philoſophical Work.

31. The Father of all things is the warm Son, their Mother is the moiſt Moon, the Earth is the Womb, the Wind carries the Seed through the Suns driving into the Womb the Earth, which foments, and at laſt brings forth the Child.

Sulphur is the Father of all Metals.

32. The Central Fire in the Earth mounts upward continually into the hollow places of the Earth, and meeting with water or moiſture, cleaves to it and makes Stones, as alſo all Metals and Minerals of different natures and properties, according as the water is pure or impure.

Sulphur is the univerſal Coagulator.

33. A ſulphureous vapour is that which coagulates Mercury, as well in Vegetables and Animals as Minerals.

Demogorgon the Grand-father of all things.

34. The Central Fire in the great World keeps it in continual motion, and cauſeth the growth of all things as well upon, as under the Earth, being the Governour of the great World.

The Vital Spirit, or radical moiſture, is the Life and Growth of all Men.

35. As the great World is governed and maintained by the Demogorgon or Central Fire, ſo Man the little World is governed, and maintained in continual motion and growth, by the Vital Spirit ſeated in his heart.

36. Fire is the Father of all things, Water the Mother, the Earth is the Womb, the Wind or Air drives the Fire, being the univerſal Agent, into the Water, being the univerſal Patient, in order to bring forth Fruit. *See my Treatiſe of the divine Character.*

37. Man, Beaſts, Fiſh and Fowl, and all that lives and grows, draw their life from the Air, onely the *Salamander* draws his life, and has his Body from the Fire, wherefore alſo in power and ſtrength he excells all living Creatures.

38. The

38. The ſecret Fire of the *Chaldeans*, which at all times draws Fire out of the Air, wherewith the Jewiſh Prieſts kindled their Sacrifice, as may be ſeen in the *Maccabees*, is made of Steel, Niter and Sulphur.

39. When we abſtract an *Aqua Regia* wherein Sol is diſſolved from the Butter of Antimony, the Soul of *Sol* and Antimony comes Bloud-red over the helm, which poured upon a Solution of *Lune*, the *Lune* falls to the bottom, and draws the Tincture of *Sol* and Antimony to its ſelf out of the Water, and the *Lune* by this means becomes red, and is a Tincture and Univerſal medicine for humane and metallick Bodies. *N. B.* The remainder of the *Sol* and Antimony that did not come over is wholly fixt, and a good Diaphoretick, thus the Souls of the dead, *i. e.* of *Sol* and *Lune* are brought up from Hell. *See Nuiſement de ſpiritu & ſale Mundi.*

40. When in the manner now ſaid with the Butter of Antimony, we bring over the Soul of *Mars* we get a much higher Tincture than from that of *Sol*, and in coming over becomes wholly fixt *See my Treatiſe de 3 principiis Metallorum.*

41. In like manner may from the Butter of Arſenick and *Lune* a white Tincture be brought over the helm, tinging *Venus*, *Mars*, *Jupiter* and *Saturn* into *Lune*. *N. B.* Theſe Tinctures in coming over are fixed by *Plato*'s Stygian Water, ſo as to need no further fixation.

42. But if we precipitate theſe Tinctures of *Mars* and Antimony with the Solution of *Sol*, and then edulcorate and dry the ſame, we by this means do obtain a dry graduating Water, which being molten with any white or red metals makes them yield good Gold, and *Lune* on the Cupel to the great profit of the Artiſt.

43. Oil of Vitriol mixed with *Sal Armoniack*, is alſo of good uſe to bring over Tinctures, but not in that quantity as Butter of Antimony.

44. Our dry, ſweet univerſal tinging water diſſolves white Pebbles and Cryſtals, and changeth the ſame into precious Stones of ſeveral colours, excepting onely their hardneſs, which it cannot communicate.

45. The eaſieſt way to get the *Sol* or *Lune* that is in *Jupiter*, is by caſting it upon molten *Venus*, which draws the *Sol* and *Lune* to it ſelf out of the *Jupiter*.

46. In like manner doth the *Regulus* of Antimony when in flux readily draw to it the *Sol* and *Luna* in *Jupiter*, and then waſhing the *Regulus* with Niter we get the *Sol* and *Luna* contained in *Jupiter*.

47. But this operation ought not to be done in Crucibles made of common Earth, which eaſily break and ſpill the metal, but in thoſe that are made of a fat crucible Clay, mix'd with coal duſt, as is taught in the fifth part of my Furnaces.

48. As the Sulphur in Tartar coagulates a thin water into a hard Hepar, or Liver ſo called, ſo likewiſe doth a fixt Sulphur coagulate *Mercury* into *Sol* and *Luna*.

49. The often calcining of Salts and diſſolving them in Water, doth purifie them, and makes them eaſily fluxible, and in particular Vitriol may by this means be ſo purified, as to yield its Oil with a very ſmall heat.

50. The Solution of *Saturn* and *Lune* poured into a volatile Spirit of *Mars* or *Venus*, draws the tinging volatile Sulphur out of the Water to it ſelf, and makes the ſame Corporal and fixed.

51. Tartar contains a coagulating and tinging Sulphur, for it coagulates Water into a Hepar, and tinges red metals to a white Stone, which may be pulverized; this Sulphur is the cauſe why Tartar will not diſſolve in cold Water as other Salts.

52. When therefore the Tartar is freed of this Sulphur that coagulates all Water, then much good may be done therewith as well in Phyſick as Alchimy, and many other Arts beſides.

53. Tartar by being boiled in a ſtrong Lye, lets go its coagulating Sulphur, and a neutral Salt proceeds from them both; but if we have a mind to ſeparate the Lye from the purified Tartar we muſt do it with an acid, that may mortifie the Lye, by which means the purified Tartar will be left ſnow white.

54. If the Lye be kill'd with a Spirit of Niter or *Aqua Fortis*, then from both theſe contraries proceeds a good Niter.

55. But if we make uſe of a Spirit of Salt, then there is made up of both a tartarized Spirit of Salt.

56. If we take diſtill'd Vinegar to mortifie the Lye, then from the joyning of thoſe both proceeds a neutral volatile Salt which is a good Diuretick in the Gout and Stone.

57. This is the beſt way of purifying Tartar, which after this Operation is of far greater uſe in Phyſick and Alchimy than the common Tartar.

58. Tartar as hath been ſaid, contains a coagulating and tinging Sulphur, coagulating all Water into a thick Hepar, and exalting the Colours of metals. Thus we ſee that by boiling Golden or Silver Veſſels with Tartar, their ſeveral Colours are exalted.

59. And whoſoever has the Art of ſeparating this Sulphur from Tartar, may by means thereof effect great and wonderfull things.

60. A like wonder working Sulphur is likewiſe found in Animals, and more eſpecially in man, who brings it with him into the World.

61. Whence ſome Philoſophers tell us, that *Adam* brought the Philoſophers Stone with him out of Paradiſe, and after his death carried it with him into his grave.

62. Minerals alſo afford the ſame coagulating fixing and tinging Sulphur, for which reaſon the Philoſophers Stone is ſaid to be Animal, Vegetable and Mineral, becauſe of each of theſe three Kingdoms an Univerſal medicine may be made for men and metals.

63. But the eaſieſt way is, when we extract the beſt part of all theſe three Kingdoms, and conjoyn them according to Art for an Univerſal medicine.

64. Wine is the chief of Vegetables, Man of Animals, and Gold of Metals.

65. Spirit of Wine purges and purifies all things, with its purifying Flame; as may be ſeen in my Purgatory of the Philoſophers.

66. The volatile Salt of Animals, and eſpecially of Man purifies all things by its volatilizing Virtue, as appears in our moſt ſecret *Sal Armoniack.*

67. The incombuſtible Sulphur of metals tingeth the Bodies of men and metals, to the higheſt pitch of Health, as may be ſeen in the third *Appendix* to the ſeventh part of my *Pharmacopæa Spagyrica.*

68. *Demogorgon* with his Ruſſet mantle and green Coat, is the Grandfather of all the Heathen Gods *i. e.* of all metals.

69. And like as in the Earth he doth generate and bring to perfection all metals, ſo alſo out of the ſame, if the Artiſt knows how to manage him, he perfects all unripe and imperfect metals, in a ſhort time, with the help of Fire, to that degree that they ſhall endure the Teſt as well as *Sol* or *Luna*.

70. This wonderfull virtue of fixing all volatile minerals, the Philoſophers call their ſecret Fire or proper Agent, wherewith not onely the imperfect metals, as *Saturn*, *Jupiter*, *Venus*, and *Mars*, but alſo volatile *Mercury*, combuſtible common Sulphur, Antimony, Orpiment, and Arſenick may be fixed, ſo as on the Cupel to leave *Sol* and *Lune*.

71. And as this Demogorgon, or inviſible ſecret Fire of the wiſe Men, doth fix the unripe minerals and metals into *Lune* and *Sol*; ſo likewiſe can it fix the ſaid minerals and metals, and exalt them to an higher degree than that of *Sol*, even to the *pluſquam* perfection of true Tinctures, whereby all imperfect metals may be changed into *Sol*.

72. This our Demogorgon hath the virtue even as it comes raw and unprepared out of the Earth to change and meliorate all metals as follows.

73. It makes *Saturn* as hard and white as *Lune*, when tinged with it, of which all manner of Veſſels and Diſhes may be made, it onely wants the ſound of *Lune* and enduring of the Teſt.

74. If a little of this Tincture be caſt upon fluxed *Venus* it preſently becomes white and hard as Steel, continues as fuſible as before, and yet is ſo hard that it cannot be filed, ſo that ſeveral Veſſels may be made of it, not ſubject to bending or breaking.

75. When caſt upon melted *Jupiter*, it makes it hard as *Lune*, and ſounding like it, is of great uſe to make all ſorts of Veſſels of.

76. And amongſt other things that may be made of it with great profit, this is one, *viz.* that Looking-Glaſſes may be made thereof, which being poliſhed continue a long time clear and fair, without being obſcured in moiſt Weather, as other metalline Glaſſes are, and all this by reaſon of the extraordinary hardneſs of the metal. *See my Treatiſe of Looking-glaſſes.*

77. This Tincture caſt upon *Lune*, makes the ſame Coal-black throughout, ſo that it is no more like *Lune*, of which Bells and Clocks may be made of a far better and clearer ſound than thoſe that are made of *Venus* and *Jupiter*.

78. By this means alſo in times of War, or other danger *Lune* may ſo be diſguiſed as not to be known for ſuch, and ſo may be a good way to preſerve it from being taken by the Enemy.

79. In like manner it makes *Sol* ſo hard that it can no way be bent or deſtroyed, and therefore might be of good uſe in many of the following caſes

80. It would be very proper for ſome great Emperour or King to make his Statue of, it being indeſtructible, and not to be diminiſhed or injur'd by any way whatſoever.

81. Money coin'd of this *Sol* would be of good uſe if a King or Prince had a mind that his Coin ſhould not be tranſported elſewhere, becauſe differing ſo much from common *Sol* it would not be paſſible in other Countries.

82. This golden Coin alſo would not be ſubject to be clipt or fil'd.

83. Medals alſo might be made of this *Sol*, and would be a great curioſity beſides the indefectibleneſs of them.

84. It would be excellent alſo to make Rings of, eſpecially ſuch as are deſigned for the remembrance of Friends, as laſting for ever.

85. It would be very proper to caſt Seals of, or the divine Character or other ſecret *Sigils*. *See my Treatiſe of the Divine Character and Seal of God.*

86. Or the ſaid Divine Character being expreſt upon my *Lapis Ignis* (which being but for a little while carried in ones mouth, cures many grievous Diſeaſes without any other Medicine) might be ſet in this hard *Sol*, and ſo without waſting be carried conſtantly about one. *See my Treatiſe of the Mineral* Squilla *in order to a long life.*

87. Great Princes alſo might have Armour and Arms made of this hardned *Sol*, which would be much better than any of Iron or Steel, which eaſily take ruſt, to which *Sol* is not Subject.

88. Of this *Sol* might alſo very conveniently be made Candleſticks and Lamps, with other Veſſels for the uſe of the Church and Altar.

89. To many more uſes this *Sol* might be put, eſpecially for that by reaſon of its hardneſs, it ſuffers it ſelf to be poliſhed to that degree, as to caſt a great luſtre from it, like the Sun.

90. As to the further uſe hereof, *See my Treatiſe* de tribus Lapidibus ignium ſecretorm.

91. With the hardned *Lune*, *Venus*, *Jupiter*, *Mars* and *Saturn*, many profitable and curious things may be done, which for brevitiy ſake are here omitted.

92. The Sulphur of the Philoſophers when ſet free from his dark Priſon, wherein he is detain'd by his Brethren, by our Key that opens all Locks, gives his Deliverer for reward, the poſſeſſion of the three Kingdoms in the World, *viz.* enabling him to make all Vegetables grow ſwiftly, and very fruitfull, to cure the Diſeaſes of all Animals, and to meliorate and exalt all Metals.

93. And when the Philoſophers, ſaith *Sendivogius*, ſee this Sulphur reſtor'd to liberty, ſwimming in their Sea, they worſhip it, and draw it out with a Silver Line, though others do it with their *Sol* attracting Magnet, and fix it into an univerſal Medicine, wherewith they afterwards effect wonders: *As may be ſeen in my* Elias Artiſta, *and Purgatory of Philoſophers.*

94. The Philoſophers ſay, except firſt you make our *Sol* (that is, the redeemed Sulphur) and Mercury white, you'l never be able to make them red.

95. They ſay alſo, our *Sol* tingeth not except it be firſt tinged it ſelf, that is exalted in its colour.

96. All things in the World have their riſe from Fire and Water, and derive their Purity or Impurity, from the Purity or Impurity of their Parents.

97. The common Fire brings forth its Fruits very ſlowly, whether they be Stones, Minerals, Animals, or Vegetables.

98. And ſo do likewiſe the warm and dry Sun, and moiſt Earth: but when we aſſiſt Nature with Art, then ſhe works much more ſwiftly, and brings her Fruits to maturity in much ſhorter time.

99. The Meteors in the Firmament which are made of Fire and Water, eſpecially Thunder and Lightning, produce ſometimes Stones, and caſt them to the Earth.

100. A common fulminating Powder made of Sulphur, Niter and Tartar gives a ſtinking offenſive ſmoak, corrupting ſome things, and meliorating others: whereas a Fulmen prepared of Niter, *Jupiter* and *Mercury*, yields a particular tinging mercurial Water. The Fulmen of *Venus* tinges *Mars* into Copper, that of *Lune* graduates *Venus* into *Lune*; and the Fulmen of *Sol* graduates and tinges *Mars* into *Sol*.

The univerſal Fulmen of the great Tincture graduates all Metals into *Sol*, which God of his mercy grant unto us, Amen.

THE

THE FIFTH CENTURY.

The beſt particular and cheapeſt Univerſal.

1. WHEN with the help of *Sendivogius* his *Chalybs*, or *Glauber*'s Magnet, we have extracted the colour from *Sol*, and again reſtored it through *Venus* and Antimony, we may by oft repeating the ſaid extraction and reſtoration get great profit, this being one of the beſt particulars that can be. This multiplication of *Sol* may very well be compared with the generation of Man, for as a Man in generating, doth with meat and drink reſtore the loſs of his Seed, by which means he continues the ſaid multiplication for a long time, by turning the meat he eats into Prolifick Seed; ſo likewiſe the Chymiſt changeth *Venus*, *Mars*, *Jupiter*, *Saturn*, *Mercury* and *Lune* into *Sol*, by feeding the diſſpirited *Sol* that has loſt its colour with them, reſtoring it to its former ſtrength and vigour.

2. The Sperm of Man is not the Seed of Man, but onely the Shell and receptacle thereof, as may be ſeen in Old Men, whoſe Sperm is unfit for generation by reaſon of the weakneſs of their vital Spirit.

3. So likewiſe the Seeds of Vegetables, are not all pure Seed, but the Houſe and Vehicle thereof, that is, of the growing and multiplying virtue, which appears in that when the Seeds have been kept ſo long till this vital virtue is exhaled from them, they never bring forth any thing.

4. No more can *Sol* be ſaid to be the Seed of metals, but onely the receptacle thereof, for the Seed is not the whole Body, but onely the lively colour of the Body, and the vegetative and multiplicative virtue that is hid in it.

5. Now as the Seed of Vegetables is more perfect and noble than the Vegetables, ſo likewiſe is mature fixt *Sol*, more perfect than *Mercury*, *Saturn*, *Jupiter*, *Venus*, *Mars*, though in the imperfect metals alſo a Seed be hid, but not ſo fixt and good as that in Gold.

6. The imperfect metals may be compared to an Herb, whoſe Seed is not yet ripe, which being put into the ground cannot grow or multiply, but rots in the Earth.

7. The virtue of Corals lies not in their whole Bodies, but in their colour; and therefore *Paracelſus* bids us not to make uſe of Corals in ſubſtance, but extract their Tincture, and uſe that for Phyſick, wherefore alſo he rejects white Corals, as being an unripe Fruit, from any uſe in Phyſick.

8. For this reaſon alſo the immature gray Pearls, which are frequently found in Cockle Shells in freſh running waters, are looked upon as uſeleſs in Phyſick.

9. And this not without reaſon, for as unripe Grapes are the cauſe of griping of the Guts, and hurt the Body; ſo ripe Grapes nouriſh and ſtrengthen the ſame, eſpecially when by fermentation they have quitted their Fæces.

10. All imperfect metals ſubvert and trouble the Stomach, and cauſe vomiting and purging, and that by reaſon of their unripeneſs.

11. Whereas on the contrary *Sol* taken into the Body cauſeth not the leaſt alteration, but powerfully ſtrengthens the ſame when reduc'd to Potability.

12. Thus *Sol* may be compared to ripe Grapes, which when eaten raw, do indeed no hurt to the Body, but rather affords ſome nouriſhment, yet cannot ſtrengthen the Heart, Brain, and whole Body, and make a chearfull mind; but when by fermentation they are delivered from their skins and other impurities, they readily and as it were in a moment perform all this.

13. In like manner when *Sol* by fermentation hath laid aſide his groſs Body and become Spiritual, if then made uſe of, it not onely nouriſheth as ripe Grapes, but exerts its virtue like a Spirit or Q. Eſſence of Wine, penetrating the whole, and making it lively, ſtrong and vigorous throughout.

14. Neither do the other metals diſplay their hidden virtue, untill by fermentation and diſtillation, they be ſubtilized and their groſs Bodies laid aſide.

15. Thus when *Lune* by fermentation and diſtillation is ſubtilized, then it draws away all Diſeaſes of the Brain, and corroborates the ſame exceedingly even as *Sol* doth the Heart.

16. *Venus* ſo purified ſtrengthens the Reins and procreative faculty.

17. The volatile ſweet Spirit of *Mars*, removes all obſtructions whatſoever, provokes the terms in Women, and opens the Hæmorroides in Men.

18. The ſweet Spirit of *Saturn* cures all inward and outward hot Diſtempers.

19. The ſweet Spirit of *Jupiter* cures all Diſtempers of the Lungs.

20. The volaltile Spirit of *Mercury* cures the venereal Diſtemper.

21. *N. B.* Theſe volatile ſpirits of metals muſt be cautiouſly uſed, as being of very great force.

22. The manner of preparing them, may be ſeen in my Book of Fires, but moſt plainly ſet down in my deſcription of the moſt ſecret *Sal Armoniack*.

23. All Spirits act according to their nature and property either good or ill, as the Bodies are good or evil from whence they are taken.

24. *The Spirit quickens, the Body or Fleſh profits nothing, ſaith Chriſt*, John 6.

25. Theſe words are ill interpreted, when underſtood by ſome, as if Spirits onely were of uſe, and Bodies not at all, which is a great miſtake, as it is applied by ſome.

26. Indeed in Metals, Vegetables and all Animals without the uſe of reaſon, who grow, move, and live, by the driving of their in-born Spirit, it does hold true, for when their Spirits are by Art ſeparated from their Bodies, the ſaid Bodies are thenceforward of no uſe, as being upon the ſeparation of their Spirit, dead and without all virtue.

27. But the caſe is different with Man, who being created in the Image of God, and endowed beſides his Animal Spirit, with an immortal Soul, which latter onely and immediately derives from God, and not from nature, as the mortal Spirits of Animals do.

28. Wherefore *Pythagoras* was much miſtaken, in believing that the immortal Souls of Men, when departed from their Bodies did immediately enter into thoſe of Beaſts.

29. Which miſtake of his ſeems to have been occaſioned hence, becauſe he knew how by Art to take

take away the Soul, *i. e.* Tincture from *Sol*, and transfer the ſame to an imperfect metal, thereby making the ſame in all things like to true natural *Sol.*

30. Certain it is that this may be done by art, for the fixt Body of *Sol* may be deſtroyed, its Soul extracted, and by being joyn'd to another metal make it good *Sol.*

31. When this diſanimation of *Sol* is duely performed, the Body is left wholly dead, and is in all things like a volatile unmalleable mineral, and cannot endure the teſt, but fumes away like Arſenick with a little Fire.

32. But in caſe this diſanimating of *Sol* be not rightly done, ſo that the Body continues as white as *Lune*, and malleable (which is a ſign that ſome life is ſtill left in it) then his Colour may be reſtored again by means of imperfect minerals, as well as his former fixedneſs in the Fire.

33. But when the Body of *Sol* will no longer endure the fire, but goes away in ſmoak, then we can ſay it is truly dead and no more *Sol.*

34. He that finds difficulty to believe this, let him reade *Paracelſus*, *Sendivogius* and other Philoſophers.

35. *Sendivogius* ſaith, *Our Steel*, that is, our Magnet, *can draw from the Rayes of the Sun, what many have ſought for and not found; if this our Magnet copulate eleven times with* Sol, *the* Sol *becomes weakned almoſt to death, and the Steel or Magnet ſhall conceive and bring forth a Son more illuſtrious than his Father.*

36. From which words it appears that *Sendivogius* had the Art to diſanimate *Sol*, elſe could never have writ ſo plainly concerning it.

37. It is certain alſo that there are ſome, that at this time can do as much within a few hours, I having lately been an Eye-witneſs of the ſame, with three other perſons in company.

38. It is not neceſſary to ſay any more how this cheap and ſpeedy way of diſanimating *Sol* is to be performed; foraſmuch as all the Philoſophers writings are full of it.

39. However to pleaſure the unskilfull I will add thus much, that this may be done four ſeveral ways.

40. But the eaſieſt and cheapeſt way is by means of Spirit of Wine, and a microcoſmical ſaline Spirit; yea this extraction may be performed by a Spirit of Wine alone, without any animal Spirit, or by an animal ſaline Spirit without the Spirit of Wine.

41. If this were not ſo, we might have reaſon to accuſe both ancient and modern Philoſophers of falſhood, who tells us that *Adam* brought the Philoſophers Stone with him out of Paradiſe, and after his death took it with him into his Grave.

42. Which words may ſeem ſtrange to ſome, foraſmuch as he was driven bare and naked out of Paradiſe.

43. Yet the Authority of thoſe who aſſert this being ſo great and inconteſtable, it cannot well be called in queſtion.

44. What therefore the Philoſophers meant by this Stone which *Adam* brought with him out of Paradiſe, is well worthy our Enquiry.

45. The Philoſophers commonly ſay our ſtone is a ſtone and noſtone, *&c.* which implies thus much, that to outward view it is a ſtone, but in deed and in vertue, a Concentrate form of *Sol.*

46. Wherefore *Petrus Bonus* ſaith, *We do not ſeek* Sol, *but the form of* Sol.

47. What is then properly this form of *Sol*?

48. *Anſw.* It is a ſubſtance which to outward view looks like a contemptible ſtone, and yet is of ſuch ſuperlative Vertue, that when joyned with imperfect metals on the Fire, it tranſmutes them into the higheſt perfection of *Sol.*

49. It may further be demanded, whether *Adam* brought ſuch a matter with him out of Paradiſe, whereby this tranſmutation of metals into *Sol* may be performed?

50. *Anſ.* Yes he did bring ſuch a matter with him out of Paradiſe, and after death took it with him to his Grave, wherewith all Diſeaſes of mankind may be cured, and all metals changed into the fineſt *Sol.*

51. If this be ſo, might ſome ſay, *Adam* muſt either have been very blind, in not diſcerning the Treaſure he was poſſeſſed of; or very envious in not communicating the ſame to his Poſterity.

52. I cannot believe that *Adam*, out of envy withheld this ſecret from his Children, but rather ſuppoſe that the blindneſs into which his fall had caſt him, was the cauſe of his not percieving the great Jewel he had about him.

53. But how could he be blind, who was made by God himſelf, and after his own Image?

54. *Adam* was certainly blind, and his blindneſs proceeded from his Pride, becauſe he aſpired to be like to God; he was not blind as to his outward Eyes, but his heart was blinded, which is by far the worſt blindneſs of the two: For all ſin and wickedneſs blinds the hearts of men, that they cannot percieve the folly of their doings.

55. Thus *Adam* alſo by means of his diſobedience to God, became ſo blind, as not to percieve, or be ſenſible of the Love that God had for him before his Fall, and how richly he had endowed him.

56 Whence alſo his Children were ſo wicked and blind, that the one Brother ſlew the other; which wickedneſs hath ſtill encreaſed in their Poſterity, as appears by the deluge, and the deſtruction of *Sodom* and *Gomorrah.*

57. And thus the World from day to day ſtill grows worſe and worſe, notwithſtanding the Examples of God's Vengeance againſt Sinners.

58. And all this proceeds becauſe men are ſo generally blinded by the Devil in ſin and wickedneſs.

59. But to leave this, it may be further queſtion'd; that ſeeing all mankind is become ſo blinded through *Adam*'s fall, as not to diſcern the Jewel they carry about them; who then was the Perſon that firſt diſcovered, that man was the Poſſeſſour of ſo great a Treaſure?

60. *Anſ.* Who was the firſt diſcoverer of this Treaſure I cannot tell, but thus much is certain, that it was an honeſt man and fearing God; becauſe God doth not reveal his ſecrets to the wicked; wherefore *Tho. Aquinas* ſaith, *Our Holy Art, either finds a man holy, or makes him ſo.*

61. But ſome will ſay, don't we reade of Heathens that have been Poſſeſſours of the Philoſophers ſtone; and how can we imagine that thoſe who have no knowledge of God, and are blinded with ſin, ſhould ever be able to find out ſo great a Myſtery?

62. *Anſ.* Thoſe Heathens that have been Poſſeſſours of this great ſecret, were not without the knowledge of God; for they lived according to the Law of Nature, honouring God and loving their Neighbour; wherefore alſo God accepted of them. They learnt to know God from his Works of VVonder,

and

and according to their knowledge, loved, honoured and feared him ; and ſo were made Partakers of his grace, light, and the knowledge of his ſecrets.

63. We are alſo to know that the Ancient Philoſophers know more than one way to attain the Philoſophers Stone ; though indeed the moſt of them ſought it in minerals and metals, which is the longeſt way.

64. And that becauſe it is impoſſible to change the metallick ſpecies, without bringing metals back into their firſt matter. *See my Treatiſe of the principles of metals, and the ſeventh part of my* Pharmacopœa Spagyrica.

65. But others have taken a nearer way to attain this ſecret ; and to ſome Chriſtians God hath been pleaſed to diſcover the ſhorteſt way of all, by revealing unto them that he made *Adam* every way perfect, giving him all that was neceſſary, either for his Soul or Body.

66. Now that *Adam* could not diſcern how richly God had endowed him, was his own fault, becauſe he was diſobedient to God, following the deceitfull Serpents advice.

67. And after this manner doth the Devil yet daily deceive Men, by perſwading them to do againſt the commands of God, and that their diſobedience ſhall not bring any ſuch miſchief upon them as God's threatnings ſeem to import.

68. This then is the reaſon why Men do not underſtand the ſecrets of God, becauſe they give too much way to Sin, whereby they become blinded, that they can neither ſee nor hear the good that comes from above.

69. Now the reaſon why moſt of the Alchymiſts have ſought for this great gift of God in minerals and metals, and eſpecially in *Sol*, is this, becauſe their intention was to multiply *Sol*, which they ſuppoſed could no way better be done than by ſowing it like other Seeds in the Earth, but could not imagine that beſides common *Sol*, there were other ſubjects, wherein the *Sol*-making virtue did reſide.

70. Which opinion of theirs was probably grounded upon that ſaying of the Philoſophers. *What you ſow, that you will reap.*

71. This ſeems at firſt ſight very rational, that from filth or excrements no good, and ſo no *Sol* can come ; but let us hear the other ſide alſo, and we ſhall be otherwiſe informed.

72. For the Philoſophers ſay that their Medicine is Vegetable, Animal and Mineral ; ſo that Vegetables and Animals are not excepted.

73. *Albertus Magnus*, writes that the greateſt mineral aurifying virtue is in Man, and eſpecially in his Head between the Teeth, and proves it ; becauſe in dead Men's Skuls he had found grains of *Sol* ſticking between the Teeth.

74. The ſame is alſo confirmed by *Thomas Aquinas*, *Rhaſis*, *Janus Lacinius*, and others.

75. There is alſo an old Book, whoſe Authour is unknown, which treats at large of that ſubject which *Adam* brought with him out of *Paradiſe*, wherein the Operator is warned to have a great care of the fumes of the matter as he would avoid the Plague, or the moſt deadly Poyſon. From this Authour I have alledged ſome paſſages in my other Writings, and ſhewed that the Philoſophers Stone may be prepared of any ſubject whoſe Elements may be ſeparated.

76. Now certain it is that from all Animals and Vegetables, the Elements may be ſeparated, and conſequently follows, that from all Vegetable and Animal Subjects, the Philoſophers Stone, or univerſal Medicine for the Bodies of Men, and Metals may be prepared.

77. *Morienus Romanus*, who prepared this Medicine for King *Calid*, declares that he took the ſubject matter of it from Man.

78. For when the King asked *Morienus*, in what kind of ſubject the Philoſophers Stone was to be lookt for ; he anſwered, the Medicine is in thy ſelf O King ; wherefore alſo after that he had finiſhed the Work, he wrote round about the Glaſs, in which the Medicine was, theſe words : *He who carries all about him, needs not the help of another.*

79. Thereby intimating, that he always carried about with him, whatſoever was neceſſary for the preparing of the Medicine, and therefore did not ſtand in need of the King's aſſiſtance.

80. This ſame honeſt *Morienus*, writes plainly concerning the preparation of this Medicine, and doth as it were with his finger point us to the matter, in theſe words of his, quoted by *Arnoldus de villa nova* ; *Grind the Phlegmatick and Cholerick with the Sanguin, untill it become a tinging Heaven*, &c.

81. *Arnoldus* explains theſe words of *Morienus* thus: *The Phlegmatick is cold, as* Mercury, *the Sanguin is warm and moiſt, as the* Sol *or Gold, the Cholerick is hot and dry, as* Sal Armoniack : intimating that of theſe three, *Mercury*, *Sol*, and *Sal Armoniac*, the Philoſophers Stone is to be prepared.

82. But that he meant not this concerning common *Mercury*, *Sol*, and *Sal Armoniack* is apparent from this, that *Morienus*, as ſoon as he had prepared the Medicine for the King, went away privately, without expecting any reward from the King ; it alſo appears from the anſwer before mentioned, which he made to the King, that he ſpoke of ſuch a *Mercury*, *Sol*, and *Sal Armoniack* which every Man carries about with him.

83. This is abundantly confirmed by all the Philoſophers that went his way, foraſmuch as they declare that no charges are required to the preparation of it, that their ſubject is a contemptible matter caſt out upon Dunghills, and trod under feet, and that the Poor have it as well as the Rich.

84. *Morienus* yet more clearly intimates this, in telling us that the matter whilſt it is preparing, exhales a ſmell like to that which comes from the Graves of the Dead, which is a very offenſive ſmell.

85. Now like as Vegetables whilſt they are putrifying give forth an ill ſcent, and Animals a worſe, as appears in the ſtink of rotten Eggs, and the putrefaction of Man's Blood, eſpecially when the ſame are putrified in a cloſe Glaſs in warm Horſe Dung.

86. For without putrefaction, there can be no ſeparation of the Elements by Diſtilation, and if no ſeparation be made, neither can any melioration or exaltation be expected.

87. We know that every *Chaos*, as it is a product of the four Elements, contains many impurities, and in particular much dead Earth, and Water void of all virtue ; and that the Element of Fire alone is proper to heal and meliorate Men and Metals.

88. Wherefore ſeeing that no ſeparation of the Elements can be without a foregoing putrefaction we muſt conclude putrefaction to be the beginning of our Work, without which no goodend can be expected.

89. Now he that knows our Horſe Dung, and how to putrifie the well known and every where to be found moſt univerſal natural ſubject by means of the

ſame, he will eaſily afterwards by Diſtillation ſeparate the moſt pure and all things penetrating and meliorating Element of Fire, from the groſs Chaos to his great ſatisfaction, and make uſe of the ſame to the aſtoniſhment and wonder of the ignorant.

90. But in this ſtate it is onely good for the health of Man; and therefore in order to its meliorating of Metals, the pure Element of Fire muſt be firſt fix'd with *Sol*, by which means it obtains ingreſs into imperfect Metals, reducing them to the perfection of *Sol*.

91. Now when the pure Element of Fire is ſeparated from the Chaos, and reduced to the higheſt degree of purity, then it ſtinks no more, neither is poiſonous as it was before purification, but is an Antidote againſt all poiſons whatſoever, wherefore alſo the Philoſophers have called their Medicine *Theriaca*.

92. But all this is to be underſtood onely of that ſubject which every man carries about with him, and brings with him out of his Mothers Womb.

93. If any one following the Letter of *Morienus*, ſhould take for his ſubject common *Mercury*, *Sol* and *Sal Armoniack*, neither will he be miſtaken, but if he rightly proceeds will have a good Work, though it be not at all neceſſary to make uſe of common *Sol* and *Mercury*, becauſe our natural ſubject contains both a living *Sol* and *Mercury*.

94. It is no prejudice to our Animal Subject, if we join Minerals with it, becauſe our *Sol* joins it ſelf with all ſubjects, and unites it ſelf readily with them. But if we be ignorant of the due proportion and compoſition of *Sol*, *Mercury*, Sulphur, or any other metal or mineral, then it is better to prepare our Medicine out of this one ſubject onely, becauſe ſo there is leſs danger of erring, as I can witneſs by experience.

95. I have alſo found by experience that this Microcoſmical Subject is alone ſufficient, without the addition of any minerals or metals, to meliorate all imperfect metals.

96. As to a particular this of all others hath pleas'd me beſt, *viz. Recipe* common *Sol*, and with the help of our Magnet diſanimate it ſo, that it may be no longer *Sol*, as not enduring the Teſt, and ſmoaking away with a ſmall Fire like Arſenick.

97. Then take this *Sol* and conjoyn it with our Microcoſmical Subject, with which digeſt a ſolution of *Lune*, by which means the *Lune* will be meliorated, and on the Cupel leave *Sol* to good profit.

98. But if we joyn common *Mercury* and common *Sol* with it, and caſt this mixture into a ſolution of *Mars*, and digeſt it for ſome days then the pure *Sol* and eaſily flowing *Mercury* graduates a good part of the groſs and difficultly flowing *Mars* into good *Sol*, to the great ſatisfaction of the Artiſt.

99. And if we unite *Lune* and *Jupiter* therewith, and caſt this mixture into a ſolution of *Venus*, and digeſt it the moiſt way, then by means of our ſecret Salt theſe two white united metals change the red *Venus* with little loſs of weight into good *Lune* that will abide the Teſt. And it is indeed matter of wonder, that our univerſal Salt, ſhould be of ſo great virtue, when fermented with white or red metals, to change other imperfect metals into good *Sol* and *Lune* on the Teſt.

100. Wherefore this ſhall be my concluſion, that in Man is hid the greateſt virtue of changing all metals, as well as the Bodies of Men, both univerſally, and particularly; which if intended for the melioration of metals, the adding of fixt *Sol* and *Lune* for a ferment will facilitate the ingreſs into other metals, and further diffuſe its tinging virtue.

N. B. I ſhall not be ſatisfied till I have given a fuller and plainer deſcription of this Royal Labour, which I intend to do in the ſixth Century, if God permit.

Novum

Novum Lumen Chymicum:

OR A

NEW CHYMICAL LIGHT.

Being a Revelation of a certain new invented ſecret, never before manifeſted to the World.

Whereby a clear and unextinguiſhable light is ſet before the Eyes of the blind World, and, as it were, palpably demonſtrated, that good Gold may he found and attained with profit, every where throughout the whole World, as well in cold as in hot Regions, ſo that in all thoſe places, where Sand and Stones are found, a Man cannot ſet his Foot, where, not onely Gold, but alſo the true matter of the Stone of Philoſophers is afforded.

READER,

I will now addreſs my ſelf to the diſcovering of the wonders of God, not hitherto heard of; to wit, that throughout the whole Earth, no leſs in cold than in hot Countries, where there are Sand and Stones to be had, good Gold may be extracted from thence with profit. Becauſe a Man cannot ſet his foot in any place where Gold doth not exiſt. Nevertheleſs Chalk, or Lime-Stones, are to be thence excepted; becauſe they onely ſeldom or never contain any thing of Gold, otherwiſe all ſandy and rocky Stones, all Flints of what colour ſoever, as alſo all Sand, fine and courſe, all ſandy Stones upon high Mountains, in deep Valleys, in the bowels of the Earth, in Ponds and Rivers, and laſtly, all the Sand on the Sea-ſhore, none excepted, although it hath as yet obtained no colour, but be white and clear. The which indeed will ſeem incredible to very many, but is aſſerted by me as a ſincere truth, which I never found, by reading or hearſay, but have proved by many and various experiments. Some of which I will here ſet down for the confirming and demonſtrating the truth of my Writings, that by thoſe, all Men of a ſound mind may be able to diſcern, that my Aſſertion is no Dream, nor fabulous trifle, but ſufficiently founded upon experience in the light of nature.

Therefore I would not have thee judge of thoſe things which thou underſtandeſt not, nor canſt not at preſent apprehend, but remember that the wonders of God triumph with magnificence and power. But ſearch out thoſe things in every part before thou preſumeſt to interpoſe thy immature judgment. And although in the proof thou ſhouldſt be miſtaken as may eaſily happen to one making tryal, yet do not impute the errour to my Writings, but rather to thy own unready Wit. For I will here write nothing but what I have oftentimes performed, and can yet perform at any time. Conſult other ſearchers after this matter, among which I think all cannot err, in a matter ſo eaſie, that even a Boy of ten years of Age may apprehend it, for what belongs to the poſſibility of it, but it will be evident to many of them with me, That there is Gold in all Sand and Stones, through all places of the World. *But there is no need that I ſhould here ſhew the way of extracting it from them, in a great quantity or large uſe, but rather I ſhall beware, that I put not ſo ſharp a Dart into the hands of my Adverſaries, to wound my ſelf, for I have publiſhed this to gratifie candid Friends, not Counterfeits, but leaſt of all the Compilers of notorious Libels, in which opinion, I will remain and acquieſce.*

We

WE will now proceed to the Trial whether those things which I have here written be true, and are able to abide the Examen of the Cupel, to wit, that in all Sand, there is good Gold.

The first Specimen of Probation.

R *Ecipe* one Ounce of white Sand or Flint, which you esteem to be altogether void of Gold, with which mix three parts of *Minium*, or of any other Ashes of *Saturn*. Put this mixture into a VVind Furnace, or to the Bellows, let it flow well together for an hour, and it will turn to a yellow glass; suffer it not to stand too long lest the glass of *Saturn* perforate the Crucible, and run out into the Ashes. Pour out the glass and powder it, and mix it with half its weight of *Sal Alcali* or Pot-ashes, put this mixture into an Iron Crucible, into which you have first put some bits of Iron, or old Nails; give fire and cause the matter to flow, and the glass of *Saturn* will be continually reduced by the *Mars*, and at length return into Lead: Pour it out into a Cone, and the *Regulus* of *Saturn* will sink to the bottom, and the Sand or Flint will be uppermost as a dross. After all is cold, take out the *Regulus* of *Saturn*, which hath drawn to it self so great a roughness and blackness from the Iron, that it cannot easily be cupellated: which you may remedy thus: put this black *Regulus* of *Saturn* into a Crucible in a VVind Furnace, cause it to flow well; and if there be of that one Ounce, cast upon it a Drachm or somewhat more of Salt-peter, and make them flow together, then the Salt-peter will attract the roughness from the *Saturn* and turn it into *Scoria*. Which being poured out and the *Regulus* of *Saturn* separated from the *Scoria*, it will be white and tractable, and easily runneth upon the Cupel. This I call washing. But if thou knowest not how to perform this Lotion, which yet in it self consisteth in an easie labour, put thy black and rough *Regulus* of *Saturn* into such an Instrument (as they call Treib Scherbe) or, a close Cupel, under a covering [or Muffle,] and suffer it so to be defecated for the space of half or at least a quarter of an hour, pour it out and separate the *Scoria* from the *Regulus*; which will be white and tractable. But the Lotion by Salt-peter is much the better.

Of this *Regulus* of *Saturn*, and of that same Lead of which the Ashes of *Saturn* were made, take equally the same weight, exactly weighed with the lesser weights, put each of them apart upon a dephlegmed Cupel, suffer them to run; compare one with the other, and you shall find, that *Saturn* which was blown off with the Sand or Flint to leave behind it a grain of Gold, but on the contrary, the common *Saturn* will onely leave a grain of Silver. Who now can deny, but that the grain of Gold proceedeth from the white Sand or Flint? For no Gold could come from the Salts. This Specimen of Probation is a palpable Argument, that Gold is contained in all Sand and Flints of what Colour soever. But that there is no difference between one Sand or Flint, and another, so that there is no more Gold in one than another, I do not assert, for (in that respect) they greatly differ. Also that the Sand of hot Regions containeth more Gold than that of cold Countreys, is in no wise to be doubted, as every prudent Man will easily think. For we have set down this Specimen of Probation, onely to the end that you may find Gold to be in all the Sand and Flints of the whole World.

The second Specimen of Probation.

R *Ecipe* one part of white Flint or Sand, with which mix three or four times as much Salt of Tartar, or of any other Alcaly, which mixture put into a Crucible, so that it be not above a third part full, because this mixture in the melting might rise up and run over the Crucible; let it stand half an hour, that it may be well melted, and it will be turned into a white transparent glass. Pour it out and dissolve it in water, or rather in a *Lixivium*, and the Sand or Flint will be dissolved, and converted into a thick Liquor. In this Liquor digest for the space of an hour or two, half an Ounce of Filings or Raspings or rather thin shavings of Lead, and the Lead will extract the spiritual Gold from the VVater of Flints, and will thence grow yellow: VVhich being taken out of the VVater dry, cupel it, and you shall find a grain of Gold. Also cupel another half Ounce of the same Lead, and you shall find a grain of Silver, as is commonly wont to be had from all Lead, from which you may be certain that white Flints and Sand, contain spiritual Gold, which becometh corporeal with Metals.

A Third Specimen of Probation.

DIssolve *Saturn* in *Aqua Fortis*, and pour into the solution Salt water, and all the Lead will fall from the VVater like a white Powder: mix three parts of this edulcorated and dryed *Calx* of *Saturn* with one part of Sand, to which add half so much of the Salt of a *Lixivium* or other Alcaly; which mixture put into an Iron Crucible, into which you have first put some bits of Iron, which being covered, suffer it to melt for the space of full half an hour, untill the sharp Spirits of Salt which were in the Lead be mortified by the Iron, for then the *Saturn* is reduced and rendered corporeal, which being poured out into a Cone, the *Regulus* of *Saturn* falleth to the bottom, which you may wash with Salt-peter as we have taught above, or purge it from the Fæces on the Treib Scherbe [or Muffle] weigh it exactly by the lesser Probatory Weights, weigh also as much of any other common Lead, which is not melted with Sand, cupel each by it self, and that Lead which was melted with the Sand, will leave a grain of Gold in the Cupel, but the other common Lead leaveth onely a grain of Silver. Which sufficiently proveth that there is Gold in all Sand, none excepted. But I do not assert that all Sand containeth so much Gold as that it may be thence extracted with profit. Because some Sand is poor, other rich, another richer. Therefore whosoever intendeth any profit by this ought before hand to know the difference of Sand and Stones, that he may not lose his labour. The which may easily be found out by experience, to wit, if you do nothing in great Quantities, before you have made trial in lesser, that is, such as may be performed by the lesser Specimens of Probation.

A Legitimate and Infallible way and manner of finding out and proving every Flint, Stone, and Sand, whether it containeth much or little Gold.

R *Ecipe* four ounces of Sand, Flint, or other Stones or Rocks, which you have a mind to prove; heat them red hot in a Crucible, and cast them so into cold Water, where they will become tractable,

tractable, and may easily be brought to fine Powder, to those four ounces of powdered Flints, Sand or Stones, put into a small Glass Cucurbit, pour two ounces of *Aq. Regis*, that the Sand may be well moistned; set the Cucurbit upon warm Sand for half an hour, and the *Aqua Regis* will attract to it self the Gold which is contained in the Sand or Flint. To which if two ounces of hot Water be poured into the Cucurbit, and mixed by a strong shaking it together, and filtred through a brown Paper, the Water with the Gold goeth through the filter, and the Sand will remain in the Paper, to which if you pour a little common Water, and let it run through it will take out the residue of the Gold, which yet adhereth to the Sand, which is to be added to the first. Upon this Solution if you pour a *Lixivium*, but rather Spirit of Urine; that *Lixivium* or Spirit of Urine, mortifieth the *Aqua Regis* and precipitateth the Gold which is in it in form of a yellow Powder, from which the Water is to be poured off, and the *Sol* to be edulcorated with fresh Water, and dryed, and that very warily, because Gold of this sort, when it groweth hot, fulminateth, so that it is shattered into minute parts. To this fulminating Gold if you add a little common Sulphur, and make it red hot in a Crucible, it doth not fulminate. If you reduce such a *Calx* of Gold mixed with Borax in a clean Crucible, you will find how much Gold that four Ounces of Sand or Flint contained. *N. B.* Except the Sand or Flint should happen also to be impregnated with Iron, which would render the *Sol* brittle and pale. For in that case, the *Sol* precipitated from the *Aqua Regia*, and burned with Sulphur would not flow with Borax, because the Iron being mixed with it, would adulterate the Probation: But if you cupel such Gold partaking of Iron, with *Saturn*, the Iron may be separated from the *Sol*, and the proof will be void of errour. *N. B.* That Sand and Flints, may indeed be proved another way; but seeing this which we have here prescribed, is easie to be practised, we will rest in that.

But this one thing is also necessary to be known, *viz.* It is indeed true, that in all Sand and Flints there is Gold, as the above mentioned proofs do witness; nevertheless know that there is a difference between native, corporeal, and solid Gold, and the volatile spiritual first Ens of Gold. For the corporeal Gold is easily extracted by the help of corrosive Waters or Salts; but the spiritual not so. And because corporeal Gold is always elicited by the benefit of the above mentioned Probation it may thence happen, that although in white Sand there should plainly be no corporeal Gold, nevertheless by the help of the aforesaid Probations it would be thence elicited, indeed not much, nor no more than what the Lead which was used for the proof, did contain of Silver: because the *Lune* in the melting or dissolving hath attracted to it self the spiritual Gold, from the Flint or Sand, so that it is thence tincted and transmuted into Gold. Which is manifest in that the grain of *Sol* doth not exceed the magnitude of the grain of Silver, which is gotten from other common Lead. But if besides the spiritual, there be also corporeal Gold in the Sand, the grain of *Sol* will necessarily exceed that of *Luna*, for the Silver which was contained in the *Saturn* doth not vanish into Air but remaineth. and because it doth not remain the same Silver, but passeth into Gold, that change is ascribed to the notable Operation of the first Ens of Gold, or spiritual Gold in the Sand. Wherefore whosoever intendeth to extract Gold from Sand, Flint or Stones with profit, ought to know certainly before by smaller experiments, that besides spiritual, they also contain corporal Gold. For I have written this Book onely upon the account of extracting from them corporal Gold, leaving the spiritual Gold to Philosophers that of it they may make their Stone. But necessity required that I should lightly touch at those few things. For if according to my prescribed Probations, any one in working should have found a grain of Gold of equal quantity with the grain of Silver, he might wonder in his mind, which way the Silver had made its escape, seeing that he had found Gold instead of Silver. Wherefore I thought it necessary to shew the reason of that, for the taking away all scruple from every ignorant mind. Wherefore whosoever seeketh Gold from Sand or Stones, let him chuse such, from which corporal Gold may be extracted with profit. For they will afford him such profitable fruit, as the white Sand denieth. But that for the performing my Specimens of Probation, I have taught to take white Sand, I have done it for this reason, that I might make it evident to every one that there is Gold in all Sand, but that it cannot be extracted from all with gain. For white Sand or Flint is very often void of corporal Gold, but never of spiritual, by which Silver may be converted into good Gold. I might have passed by this admonition with silence, seeing that those things are not necessary to be known by the vulgar, in asmuch as corporal Gold will abundantly satisfy their desire; but a Philosopher neither wanteth, nor seeketh corporal Gold, but onely spiritual, to prepare of it a Tincture. Add, that to him it is sufficiently known, in what subjects the first Ens of Gold is plentifully contained. Hence, although the first Ens of Gold be also in white Sand, as is manifest by the foregoing proofs, he useth not that, but rather seeketh such Stones for his work, as contain much Tincture. Neither also doth any true Philosopher so tie himself to this or that subject onely, that he will not elicit his Tincture from any other, inasmuch as it is evident to him that the first Ens of Gold may be found in all things in the whole World. For whersoever there is Sulphur, there may also be had the first Ens of Gold, whence a Tincture may be prepared. But it is evident that in all Vegetables, Animals and Minerals there is Sulphur. For the matter of the Stone of Philosophers, every where offereth it self, so that the poor as well as the rich may attain it without cost, according to that saying of the Philosopher; *That their matter is every where obvious, and prepared without money, trod under foot and thrown to Dunghils.* So the true Philosophers speak and write. But Sophisters, who falsly assume the name of Philosophers, wandring up and down from Court to Court, where they offer their service for the acquiring the Philosophers Stone, by their lying Fables, perswade credulous Noble men, that the matter of the Stone is to be sought in this or that place or mountain, as in *Hungary*, *Transylvania*, the Forrest of *Hercynia*, *Thuringia* or *Bohemia*, or in the Rocks of *Sueden* or *Norway*, and elsewhere. Others again perswade credulous Persons, that the Stone of Philosophers, can be made of nothing but common Gold, and therefore require of their Patrons not onely some ounces, but some pounds of Gold, for their own greater profit. One of those Pseudo-philosophers was lately here at *Amsterdam*, who by per-

swading certain Merchants, trickt them out of two and twenty Marks of Gold, thence to make the Philosophers Stone. He indeed put the Gold into the Vessel according to his own manner, before those Merchants, giving to it a continuall Fire But after much time being elapsed, when they expected to reap the Fruit, he, who had plaid the Philosopher, privately withdrew himself into I know not what Countrey, and would not return to take out the two and twenty marks of gold. Therefore the Merchants themselves being about to take them out, found those solar Birds were flown, and had left onely the empty nest. Which empty nest as yet lies in a place in this City, nor doth any one know how to convert it to his own use. But if the Merchant had given to that impostor in hand, onely two, or at the most three ounces of gold, they had not received so great a loss. But as they unadvisedly credited his fine Clothes, and his finer words, so they were intollerably deceived.

A true Philosopher wanteth not so much gold for his Medicine, inasmuch as if he bringeth but one half ounce to perfection, it may suffice for his whole life, and may be in his own power to do the same again as often as necessity shall require, so that he will have no need to run up and down from one to another who are greedy of gold, to blemish the noble art of Chymistry, and bring it into hatred with the whole World.

Some years since, when I had written of the Prosperity of *Germany*, and from a good intention had taught *how Wine and Corn might be concentrated, and in case of necessity, might be commodiously carried from one Countrey to another, and there safely kept in Garrisons or Fortresses for future use*; fearing that at sometime while the Shepherd slept, that most ravenous Wolf the *Turk* might break into the *German* Fold, and cut the throats of what Sheep he could not carry away. Against which, *Farner* with his accomplices, hath set forth notorious Libels, and hath every where traduced me for a false Prophet: Whose Calumnies I have not opposed, because he hath sheltred himself under the protection of Princes. Moreover, this *Farner*, with a consort of ruiners of fame, or good name, have reproachfully wounded my Honour, by falsely accusing my Writings, and traducing them for Lyes: And seeing that almost all of them abide in great Men's Courts, and have not put their names to ther invective Papers, I have not indeed been able to reach them. But yet at length those Men of darkness, who have concealed their names, that they might give the greater reputation to their slanderous Papers, do come to be more and more known to me. Besides at last the event hath shewed those things to be true, which I had predicted should happen; to wit, that the depraved Christians should be chastised by the *Turks* and *Tartars*. But it is to be pitied that also Men of better note, should be ensnared and captivated by the common judgment, by reason of that Company of the Devils attendants. For the unerring truth declareth, that the righteous scourge of God, will not be taken away from us, before such spoils of a Man's good name be restrained by the Magistrate.

Now, to return to our purpose, to demonstrate, that not onely Gold, but also somewhat more rare; to wit, a true Tincture is hidden in Stones, and by the help of Art may be extracted from them, which the Ancients have hinted at in these words: *Auro quid Melius? Jaspis*, &c. And that there is much Tincture contained in the Jasper, I have long since inculcated in other places of my Writings. *Paracelsus* highly commendeth *Red Talck*, *Granates*, *Antimony*, and *Lapis Lazuli*, adding that Tinctures or the first Ens of Gold, may be gotten from them by the help of sublimation. Moreover the first Ens of Gold, may also be found in other Stones, especially in the *Hematitis*, *Scythis*, *Magnesia* of *Piedmont*, *Smiris*, and others of that kind, in which it is so fixed, that there is nothing wanting to obtain it but onely the way of extracting, and giving it ingress by *Sol*. On the contrary, the first Ens of Gold is indeed in Vegetable, Animal, and Mineral Sulphur, Marcasites, and Antimony, and that abundantly, but so volatile that Stones are to be preferred to them.

And although my intention in this Book extendeth no farther than the extracting of Gold out of Stones, Sand, and Flints, yet nothing hinders but that in a few words, I may also shew, that in Stones, there is not onely fixed Gold, but also volatile, whence a true Tincture may be perfected. Which Tincture I have not as yet made, but nevertheless I am certainly perswaded that it is in no wise impossible to be done. For whosoever can render the first Ens of Gold, in Stones, volatile, and draw it out by Distillation, he will continually obtain a gradatory water, whereby he may coagulate every running Mercury into good Gold. But he that knoweth how to joyn this volatile Gold with corporal *Sol*, to unite them and procure ingress, may thence expect a far greater good. For the first Ens of Gold is more conducible for the preparing Tinctures, than corporal Gold, as one of the Philosophers hath signified in the following words: *Thou canst not make Gold or Silver, except thou shalt obtain their first Ens.* The first Ens of Gold, which is hidden in all Vegetables and Animals, coagulateth Mercury also into a yellowness, but not constant; but if it shall be fixed, it also coagulateth and fixeth with constancy, but not before. Therefore it is most certainly true, that where Sulphur is, there is also the first Ens of Gold; and where there is the first Ens of Gold, there is also Tincture. Therefore seeing that Sulphur may be found, in all things in the World, even in the smallest Herb, it followeth that also from every Herb, Wood, Stone, or Bone, a true Tincture may be prepared. Whosoever will believe, let him, it matters little to me whether it be believed or not, I think my self satisfied in that I have not put that light which I have received under a Bushel, but have exhibited it to the World for information. For the light conduceth nothing to him who is blind, and resolveth to remain so. You shall find more in my third Century, as also in the sixth part of my *Pharmacopœa Spagyrica*.

How it may be known whether Sand, Flints, and the like Stones, being pregnant with Gold, contain much Gold, or but little.

WHite Sand and Flint, contain the least Gold of all; which Sand indeed is never without Gold, although it cannot be extracted from it with profit. In the white and red, there is more Gold than in the white, nevertheless not always so much as will pay the cost. In the yellow, brown, or black, there is commonly much Gold contained, whensoever veins of white or yellow Sand run through them, and especially when such Sand shineth with abundance of small golden

golden sparks, closely adhering to each other. In like manner that Sand is rich in *Sol*, which is like to Talck, or when Stones are found in it, in which there is red or brown Talck, even as *Sol* is contained almost in every Talck, nevertheless in some more, in other less.

All River Pebbles (which although outwardly they appear white, yet when heated red hot and broken, are stained with yellowness, and contain *Sol*) are in extracting sufficiently rich in Gold.

Green, yellow, or blue Stones, being transparent like horn [called in the *German* Tongue *Hornstein*] are also for the most part fruitfull in Gold. Also all red, dark-coloured and black Flints contain Gold, with which Iron is frequently admixed, which in the extraction is drawn out with the *Sol*, and weakneth the *Menstruum*, and rendereth it unprofitable.

All Quarries or rocky Stones, whether they be found in the Earth after the manner of Ducts, or whether they lie in the open Air, when they are coloured, contain Gold. Every *Hæmatites*, and that which is a kin to it, the *Smiris*, the Granate, and *Lapis Lazuli*, all contain Gold, nevertheless always one more than another, so that some of them are rich in Gold.

All Granates contain Gold, and besides Gold, also the first Ens of gold; but they are endowed with so hard a body, that *Aqua Fortis* cannot exercise its power upon them. But there may be a remedy found, by whose help their extraction may be instituted.

In every golden Stone called *Chrysocolla*, *Saphyr*, *Ruby*, *Amethyst*, and *Hiacynth*, there is gold, but difficult to be extracted. All Fluors or things fluxing, which are applied to the Mines of *Sol* and *Lune*, for the bringing their Oars to a flux or melting, whether they be of a violet colour, or purple, yellow, red, or green) are all endowed with unripe and volatile gold. Which if you shall make red hot, the colour evaporateth like a green, yellow, or red smoke, leaving the Stones white. But if any Man shall know how to intercept, and detain such fugacious *Sol*, he may therewith coagulate *Mercury* into gold. In like manner from all Stones, in which is the first Ens of gold, a green-water may be extracted by the help of Distiliation, in which *Mercury* coagulateth it self into gold. The Ancient Philosophers have called such a green-water, their *Green Lyon*, which devoureth gold, and of it prepareth a Tincture for *Lune* and *Mercury*.

Concerning this matter, I could indeed say somewhat more, did not the avarice and improbity of Men, who seek nothing but the damage of their Neighbour, restrain me. Hence all those in which any light of God shall arise, ought diligently to beware that they communicate nothing of it to wicked Men, although they put on the shape of an Angel. For Faith is now no where kept among Men, as these following words of a golden Alphabet do witness.

Soli Deo tu Confidas,
Promissis hominum diffidas,
Deus solus fidem servat
A mundo fides exulat.

In God alone repose thy trust,
With Mens pretence be not beguil'd;
God onely keepeth Faith, is Just,
Which from the World is quite exil'd.

If many years ago, I had known those things which I now do, it would have profited me much in being aware of the dissembled sanctity of impostours. But what is past cannot be recalled: Let these things at this time suffice to be spoken of the knowledge of Sand and Stones, every Man may look further for himself, and search out and learn more. If any Man findeth any good from what I have written in this Book, let him give God thanks, and be mindfull of the Poor; if not, let him look upon himself as unworthy to be partaker of it. For I have here written more perspicuously, than any Philosopher hath done before me, in which I rest. It now remains that we should say something concerning the easie way, and incomparable invention, by whose benefit *Sol* may be extracted from Sand and Stones, in great quantity and with a considerable gain. Which invention hath been hitherto unknown to the World, and it is almost impossible that a better should be found. But that the searcher into Art may see that this new invention of mine, is of all the most easie for the extracting of Gold from Sand or Flints, and that the World hath never known the like, I have thought fit to shew in what this *Compendium* consists, and it is thus. It is sufficiently known with what labour and costs the ancient Workers in Metals, and even those at this day, have extracted, and do extract Gold from Sand and Stones, *viz.* when first they burn the Oars or Stones, then grind it in peculiar Mills accommodated to that purpose, with *Argent-vive* and water, where the *Argent-vive* draweth to it self the *Sol*, and the Stone goeth away in the washing, and the greatest part of the *Argent-vive* is strain'd from the gold through Leather, which may again serve for the same use. Then in Iron Retorts they drive out the residue of the *Argent-vive*, which yet adhered to the *Sol*, which is saved; then they melt the *Sol*. In which operation they lose much of the *Argent-vive*, which in the grinding and washing goeth away: so that often times the charge of the *Mercury* is no less than the gain of the gold. Therefore by this way nothing can be gotten from a poor Mine. But this is the easiest way they have to separate *Sol* from its Oar or Stones.

Another way is, when they mix the washed Oar (which the *Germans* call *Schlicht*) with its weight of Litharge, and melt it with Bellows, then cupel the *Regulus* of *Saturn*, and so they obtain the *Sol* which was in the Oar. Which way of melting, is also dear, because much of the Lead is lost: But yet they are obliged to follow this way, who know no better. Now I will compare my way with this, that it may be evident which of them is the most easie and profitable. As for my method of extracting, it chiefly depends upon four singular *Compendiums*, by which the operation is rendred easie. The first of which is a water of small cost, which may be copiously prepared, without Distillation.

The second is a singular Metal, of which the Kettles or Pans are made, in which the Stones or Sand is boiled with the water of small cost, and yet are not corroded nor consumed. And when the water shall have dissolved and imbibed the *Sol* in the Sand, the Oar, Sand, or Stones, with the water are to be taken out of the boiling Vessel, and put into another Vessel adapted to this use, with a bottom all over perforated with small holes [like a Colender] and first covered with inside, with a thin Matt, then the water will drop down through the Sand and

and Matt into another Veſſel placed under it; moreover more hot water is to be poured upon the ſame Sand, and let to run through it, which water will alſo extract the gold which as yet remained in the Sand. And after this Elixiviation, the Sand, (which is now of no uſe) is to be taken out of the filtering Veſſel, and this labour to be continued ſo long, untill no more Sand is to be extracted.

The third *Compendium* is this, when the *Lixivium* of Gold, is collected to a juſt quantity, a ſingular Water of ſmall coſt, is poured into the Solution of Gold, whence all the *Sol* is precipitated from the Solvent, the Solvent by inclination is decanted from the *Calx* of *Sol*, and may again be uſed for the like extraction, ſeeing that it ſtill retaineth its ſtrength, being nothing weakened by the precipitation. Therefore we may uſe this Solvent a long time. And that which is loſt by pouring too and again, is of ſmall charge, becauſe it may be recruited again by the like cheap Water. But if one ſhould mortifie that diſſolvent with other contrary *Lixiviums*, to precipitate the *Sol*, as otherwiſe is wont to be done, and I have taught above, about the proving of Sand, what a loſs ſhould we undergo, if at every time we ſhould deſtroy our Solvent? Beſides ſuch an extraction is coſtly and laborious, when made in glaſs or earthen Cucurbits.

But this extraction is almoſt of no charge, ſeeing that it may be perfected in great Kettles, and the Gold thence precipitated without loſs of the Water. This extraction of Gold is like the extraction of Salt-peter from Earth, where the VVorkmen alſo elixiviate one part of the Earth, by the help of VVater, which Earth they then throw away, and in room of that put other Earth into the Veſſel, which they alſo elixiviate or waſh, and that ſo often till they have elixiviated all their Earth impregnated with Salt-peter. And by the ſame reaſon we elicit our Gold from Sand, as they make their Salt-peter.

The fourth *Compendium* is this, that the precipitated *Calx* of *Sol*, after the VVater is filtred from it, is taken out of the filter and dried, and by the benefit of a certain ſingular good flux, not at all coſtly, is reduced, ſo that in the melting nothing of the Gold is loſt.

In thoſe four *Compendiums* the whole work of our extraction conſiſteth, as a building ſtanding upon four Pillars, one of which failing, the whole ſtructure is ruined. He that knoweth thoſe four *Compendiums* may boldly enter upon the work, to extract *Sol* from Sand and Stones: for then it will be a work of profit to him, otherwiſe not, which I have declared for the information of every man.

But that I have made none of thoſe four *Compendiums* manifeſt, let no man wonder, becauſe I have been ſufficiently hurt by the ſlanderous Forgeries of cavelling Detractours. For when by reaſon of their dull apprehenſion, they could not underſtand nor perform thoſe things which I had written openly and plain enough, they falſly traduced my Writings, as abounding with lies.

Let theſe things ſuffice to be written at this time, concerning the extraction of Gold out of Stones, Sand or Flints: which I doubt not but will be of uſe hereafter to many indigent Perſons. For although all men ſhould apply themſelves to that extraction, yet they would in no wiſe incommode one another, ſeeing there are Sand and Stones every where obvious to all. And alſo the Salts for extracting are ſo plentifully afforded, that nothing is wanting but a man to put his hand to the work. But ſome one may here object and ſay: I do indeed believe *Glauber*, that in the Sand and Stones of the Eaſt and VVeſt *Indies*, *Africa*, *Spain*, *Italy*, *France*, and other hot Countries, much Gold may be found, but who will remove his dwelling thither to extract it? There is no need that any ſhould go dwell in *Africa*, or either *Indies*, thence to fetch us Gold, ſeeing that it may be had ſufficiently in *Europe*, and may be found in all cold places. It is well known, that in many parts of *Germany*, Gold is elicited from the Sand as well of ſmall, as great Rivers and Lakes. But that more Gold may not be had in *Germany*, which is temperate, than in cold *Norway*, or *Sweden*, and leſs in *Germany* than in *France* or *Spain*, I will not deny. Therefore we need no Commerce with thirſty *Africa*, or *America*, as that with great peril of body and mind, we ſhould ſeek Gold thence, ſeeing that we have it in every Countrey of *Europe*, and that not onely under ground in the Veins of the Earth, whence it is to be digged out with great trouble, coſt and labour; but it is alſo every where manifeſt upon the Earth, where it is much more largely and eaſily acquired. The moſt famous Monarch of Philoſophers, *Paracelſus*, in his Book of the Vexations of Alchymiſts ſaith: *That more Gold and Silver may be found above the Earth, than in its profundity, and that oftentimes a Countreyman throweth a Stone at a Cow, which is of greater value than the Price of the Cow.* Which thing indeed is certainly true, nevertheleſs whoſoever will not with *Glauber* believe it, let him remain in his unbelief. In *Eſdras*, we reade theſe words: *There is much Earth of which Potters make their Veſſels, but a ſmall quantity of Powder or Duſt of which Gold is made.* Which words are commonly thus interpreted, that, by the words powder or duſt of which Gold is made, the Writer hath underſtood the Stone of Philoſophers. The which is very agreeable to truth, but yet no Earth is found void of metals, nevertheleſs all are not ſo rich, as to afford any profit in the extracting. On the contrary all Stones and Sand (although every of them doth not contain corporal *Sol* ſo largely, as to be thence extracted with gain) rejoyce in the firſt Ens of Gold, or ſuch a *Calx* by whoſe benefit Gold may be made. Which powder, if we know how to extract from them, we may make it better than Gold it ſelf. But ſeeing ſuch an Aurifick *Calx* is very largely diffuſed in Sand or Stones, and cannot be thence hammered out, but is extracted by Art alone, therefore the blind Covetours of Gold, with the Ignorant, will not believe it, becauſe they know not how to perfect it. Hence an Art of this kind was by the Philoſophers kept moſt ſecret, where *Paracelſus* ſpeaking of the firſt Ens of Gold, ſaith that it may be elicited by ſublimation. *Baſilius* writeth that the preparation of the univerſal Tincture, may be compared to the diſtillation of a burning Spirit from the Lees of Wine. A compariſon ſufficiently perſpicuous! For even as in a great quantity of Wine or Beer, there is hidden but a ſmall quantity of good Spirit, and the reſidue is nothing but an unprofitable mud, but nevertheleſs that little Spirit, by the help of diſtillation is always extracted from the great quantity of unprofitable mud, with gain, and is concentrated into a very ſubtile penetrating Spirit, of which one ſpoonfull is more to be eſteemed than a whole pail full of Lees. By ſuch means the Philoſophers would have us extract

tract by Art, that firſt Ens or form of Gold being very far diſperſed in Sand and Stones, and concentrate or bring it into a ſmall compaſs, of which, but asmuch as the magnitude of a Peaſe, is of greater worth than a huge Mountain of unprofitable Earth. Moreover, this I will not conceal, that throughout all *Germany*, in and about the Rivers may be found Stones, which are ſufficiently rich in Gold and Silver, and moreover if you break them into pieces, you ſhall find within them little Hoſes and Caverns, which abound with a yellow or brown Powder, which if any one ſhall take out, and melt it together with Borax, he will acquire *Sol* mixed with Silver. But as yet, I never ſaw any man, who knew this ſort of ſtones, and much leſs that golden *Calx* which is hidden in them. Which thing without doubt they have paſſed by, by reaſon of their negligence, not loving or ſeeking to know the phyſical *Magnalia* of God. I have found many the like ſtones in the ſandy Hills about *Utrecht*, and in other Sand-pits of this Belgick Nation, but more about the Banks of the *Rhine*, and the Iſle, as alſo the Coaſt of the Southern Sea, ſome of which ſtones I have yet by me. Alſo in the rough places of *Walavia* you may find much Sand and Stones, which contain contain corporal Gold. But there is no man knoweth any thing of them. And this might be of great uſe to Children, if they were placed for a time in the Shop or Workhouſe of ſome Artiſt, of whom they might learn, whence in any caſe of neceſſity they might be able to ſuſtain themſelves. But the rich, relying upon their own fortunes, think that they have Wealth enough for their Children, but if any adverſe fortune ſhall chance to befall them, as their Houſes to be burnt, or their Ships robbed by Pyrates of their rich Merchandizes, or be caſt away by Tempeſts, or their Debtours break and run away in their Debts, then they know not which way to turn themſelves; and becauſe they have learned no Art, whereby to get their living, they commonly degenerate into men of a deſperate life. For one leaveth his Wife and Children, and goeth into the *Indies*, where not a few have become a Prey to wild Beaſts or Cannibals. Another, for a ſmall ſtipend or pay, ſelleth his Freedom to fight by Sea and Land, untill like a mad Dog he is miſerably ſlain. [*I have heard that it is a Cuſtom in* Germany, *that a man may play away, pawn, or ſell his Liberty or Freedom, which being once gone, he becomes a Vaſſal or Slave to the publick Service of the Prince or State, during his Life.*] Others, (after they have conſumed and waſted all their ſubſtance, and have learned nothing that is gainfull in their youth, whence they might honeſtly maintain themſelves and Families) betake themſelves to a vitious kind of life, till they periſh in it. To have truely learned Mechanick Arts, indeed helpeth much in fortunate times; but when the times happen to be troubleſome and difficult, and many men in the ſame City exerciſe one and the ſame Art, one often hurts another, by eating the Bread out of his mouth, and reduceth him to ſtraits. But if a Phyſician knoweth ſomewhat beſides the Profeſſion of Phyſick, by which he may obtain a Living, he will have no need to make ſo many Viſits to the Sick out of a preſſing deſire and expectation of getting mony for his diligent attendance. Therefore Hermetick Philoſophy and Medicine, with their Couſen *German* natural Alchymy, are the moſt excellent of all Arts, and will ſo remain to the End of the World.

Seeing therefore that ſuch great Treaſures (as we have heard) are hidden in the deſpiſed Earth, and in ſuch ſubjects as are every where trampled under foot, wherefore ſhould we not extract them, for an honeſt maintenance, and defence againſt the injury of the times? Why ſhould we not leave *India* to the *Indians*, and have regard to our own *Europe*, which abundantly affordeth whatſoever we need for the ſuſtentation of Life? I cannot but ſay again and again, that were I but ten years younger than I am, I would not ceaſe, but for the good of the publick, would publickly teach, and demonſtrate to the Eye, true Philoſophy, Medicine, and Alchymy. But my glaſs being almoſt run, I muſt commit the care of this labour to others who are younger and have greater ſtrength of Body. Therefore in the mean time, whatſoever good I can do my Neighbour by wholſome Writings, I will not omit. I intend ſhortly (God favouring my deſign) to publiſh many ſecrets, hitherto unheard of. Nothing now remains but to cloſe this little Treatiſe with,

The End.

Glory be to God alone.

An Admonition to the READER.

WHatſoever I have written in this little Book of the compendious extracting of Gold, out of Sand and Stones, is ſo true, that nothing at all is to be doubted concerning it: Nevertheleſs after this Treatiſe was gone to the Preſs, another way, and that much better came into my mind, by the benefit of which, Gold may be extracted with a much greater expedition, than by the help of the former. Becauſe for the operation of this laſt way, there is no need of any Kettles or Pans made of a certain ſingular Metal, but the extraction may be made in quantity without any boyling, in ſuch Veſſels as are every where in hand, and may be had, ſo that one man in one day, may by an eaſie buſineſs perform the extraction of a thouſand Pounds weight of Sand. Which method is indeed much to be preferred to the former. Wherefore I could not but alſo notifie this way of extraction. What ſeekeſt thou? If I ſhall find that thoſe my profitable inventions are gratefully received, I will not neglect officiouſly to ſerve the publick, in this preſent evil Age, and in the worſer to come, by publiſhing the ſame. With which, benevolent Reader, I commit thee to the Divine Care and Protection. Dated at Amſterdam *the 26th. Day of* July 1664.

A Spagyrical Pharmacopœa: OR DISPENSATORY.

Being an exact deſcription by what means, profitable, efficacious, and penetrating Medicines may be made, and prepared out of Vegetables, Animals, and Minerals; after an unwonted and eaſie method.

PART I.

To the well minded Reader.

SOME or other will perhaps wonder at, and fain know what the reaſon ſhould be of my deſcribing this Pharmacopœa Spagyrica, *or Chymical Diſpenſatory, eſpecially when they conſider that there are not onely found various preparations of divers Chymical Remedies in my Books that I have publiſhed, but alſo many ſuch innumerable Writings of ſuch kind of buſineſſes, are publick even from the days of old down to this very day, both profitable ones (of which the number is very ſmall) and alſo unprofitable ones (of which there are a great multitude,) inſomuch that it might ſeem altogether needleſs to commit to the Preſs any more matters of that kind. To ſatisfie ſuch a one that thus enquires, I judge it well worth my while to demonſtrate in this place, that it is not onely very profitable, but alſo highly neceſſary, well to diſtinguiſh between good and tried Medicines, and ſuch as are not proved ones, not becauſe you ſhould neglect, correct, reject, and ſuppreſs other Mens Writings, and to eſteem highly of mine. No ſuch matter, for I well know that none can give more than he poſſeſſeth, and if any one doth (out of a candid mind) bring to light any thing for the profit and benefit of his Neighbour, how vile ſoever, and mean the thing be, yet is it to be moſt thankfully accepted of; and therefore let no body be ſo proud, as to preſume upon the rejecting of the induſtry and labour of another Man, but rather extoll it with praiſes, though he himſelf could have done better. And ſo by what is here ſpoken, I would hint unto you that the very reaſon why I have publiſhed this ſmall Treatiſe, is this,* viz. *that my inventions may reach out an helping hand to poor afflicted mankind, and that I may aſſiſt them in a Chriſtian manner, according to the will and command of the moſt high. And although I have already deſcribed the preparation of many profitable Medicines, as well out of Vegetables and Animals, as out of Minerals, in my Philoſophical Furnaces, by the uſe of which in caſe of neceſſity, every curable Diſeaſe my be ſufficiently enough driven out and carried off; yet nevertheleſs it hath ſeemed expedient unto me, to ſet forth this little Work under three Parts, each of which parts ſhall contain ſingular Medicaments as for example. The firſt Part ſhall comprehend ſuch Medicines, as proceed from Vegetables, the ſecond Part, ſuch as proceed from Animals, and the third Part, ſuch as may be had out of Minerals. And this alſo is a primary reaſon why I have compriſed each kind of Medicaments in a ſingular Work or Treatiſe, becauſe of the envious know-littles, and fooliſh deriders, and deſpiſers of Art, who reject all Mineral Medicaments, (but they know not their properties) as unſafe at all times, becauſe not taken forſooth out of the wholſome Vegetables, (whoſe uſe and virtue [ſay they] hath been approved for many Ages) but out of the poiſonous Minerals and Metals, whereto no truſt is to be given, and the uſe of them too is to this day very rare, and their operation too vehement. Now that I may ſtop the mouths of theſe kind of Men, and that they may ſee and know, that I likewiſe am well verſed in the virtues of Vegetables, and their true preparations, together with their purification and fundamental Anatomy, and with their reduction into moſt wholſome and moſt ſafe Medicaments, I have purpoſed with my ſelf in my firſt part of my Spagyrical Diſpenſatory, to treat of no other things ſave onely ſuch Medicaments as are made out of known Vegetable Simples, without the addition of any other things, (either Animal or Mineral) as for inſtance, out of Herbs, Flowers, Roots, Fruits, and Seeds, their ſeparation by Art, and their reduction into a better form. In the ſecond part, we will treat of ſuch things onely as proceed from, and are prepared out of Man, and other Creatures, and ſuch as live in the Air, and alſo ſuch as live in the Waters. But in the third Part I ſhall not deſiſt from defending thoſe Medicaments of mine, which I publiſhed ſome years ſince, and were prepared of Minerals, and ſhall demonſtrate unto you, that they are not at any rate to be ſhunned or neglected, if rightly prepared and applied, but are to be preferred far before thoſe Medicaments that are prepared out of Vegetables and Animals. To them I will alſo adjoyn the uſe and preparations of ſeveral other things, which I never as yet made mention of. Nor do I doubt but that the eyes of the blind will ſometime or other be opened, ſo as to ſee the truth, and confeſs it and love it, to the doing whereof, I pray God, that Eternal, Immutable, and durable Light, the Father and defender of the truth to help us.* Amen.

THE

THE SPAGYRICAL PHARMACOPOEA: OR DISPENSATORY.

What Vegetables are, or what is meant by the name of Vegetables?

YOU are in the firſt place to note, that under the name Vegetable, comes all that which hath its Food out of the Earth, which grows or is encreaſed, be they Herbs, Shrubs, or tall Trees with what appertains unto them, as the Root, Stalk, Leaves, Flowers, Seeds, and Fruits of them, as well cultivated as wild, both of our own Countrey, and Forreign, as well the known wholſomes one, as the unknown and hurtfull, whatſoever name they are called by, the kinds, ſhape, form, property, virtue, and power; of which, may be found deſcribed by many ancient and later Philoſophers and Phyſicians, ſo that 'tis needleſs to make any farther rehearſal of them.

My purpoſe is onely to tell by what means, and by what moſt excelling way that innate virtue, operation, and efficacy, which God hath implanted into them, may, and indeed ought, by the dexterity and induſtry of Man, to be ſeparated from their dead Fæces and Husks, and be concentrated and applied in a convenient form to Diſeaſes, and be reduced into a moſt pleaſant and acceptable Eſſence. But ſome may object and ſay, what good is here in beſtowing ſuch a deal of labour and care to extract the virtues out of Herbs, and concentrate them, and ſo at laſt adminiſter them to the Sick? Will it not be all one, if any one know their natures, virtues and properties, (the which may abundantly enough be known by the large deſcription given of them, in the Books both of the Ancient and Modern Phyſicians) and ſo make uſe of them, green and dryed, according as they are at hand, or elſe firſt ſteep them in Wine, Ale, Water, or any other drink uſed at Meals, or elſe boil them therein, or omit the decoction, and drink the infuſion, and ſo adminiſter help. Will not that perform the very ſame effect, that the well prepared, pure, ſubtile, ſweet, and efficacious eſſence will? I anſwer that without queſtion, there is extracted ſome kind of virtue out of the Herbs, by ſuch a kind of infuſion in Wine, Ale, or ſuch other like drinks, and is together with the Wine carried into the Body, and effects no ſmall things, if it meets not with too much matter that is to be turned out. But yet no body will deny but that their virtues being extracted and concentrated, and taken in a ſpoonfull of Wine or Ale, will operate more ſpeedily, and be taken in more pleaſantly, and diſplay its virtues more effectually than the boiled Herbs, or its infuſion; wherein by reaſon of the virtue of ſome few drops as it were lying hid in a whole handfull of Herbs, we are conſtrained to drink down together herewith ſuch a deal of Wine or Ale, which too is rendred very unpleaſant and ungratefull by the Herbs: This the Ancient Phyſicians well obſerved, and made an accurate ſearch many Ages ago, by what means they might beſt of all prepare Herbs ſundry ways, ſo as to be taken inwardly with delight, and be encreaſed in their virtues. Thence it came to paſs that ſo many preparations are brought into the Diſpenſatories, which abide in uſe even to this very day: amongſt which there are diſtilled Waters, Oils, Balſoms, Ointments, Juices, Electuaries, Conſerves, and ſuch like; the which I do not by any mans reject, but onely mention how the virtues of Herbs may be adminiſtred to the Sick, in a far more pleaſant form. It is all one to me, if the aforeſaid and uſual preparation of Herbs be ſtill in beſt repute and ſo continue, for I neither ſow there, nor expect to reap thence. And ſhould I need their help (which God forbid) and that I had no better to ſupply my neceſſity, I would give God thanks, for his vouchſafing me a part of thoſe prepared Herbs, leſt I be conſtrained to make uſe of raw Herbs, in that manner that the Cows eat graſs, but yet that I have better, no Body can blame me, if I rather uſe them, and am willing to communicate them out of love and duty to my Neighbour. Verily no Body is compelled to do otherwiſe than as pleaſeth him, one uſeth Herbs in an infuſion of Wine, another eats them with Vinegar, Salt, and Oil, another takes them green as they are, and cuts them ſmall, mixeth them with Sugar, and aſſoon as they are come to a dryneſs, brings them into Powder, and takes them in ſome Broth; Another may thicken them with Honey, and Sugar, ſqueeze them in a Preſs, and ſo uſe them. And plainly 'tis no matter what way a Man takes in uſing them. Some there are that can't abide any Powders, becauſe they ſtick to their Gullet and will not paſs down into the Stomach, others can't endure Pills, and ſome you will meet with to whom all ſweet things as Honey and Sugar are diſtaſtfull. And you will find many too that can't endure Wine or Ale, wherein Herbs have been ſteeped but all night. Upon this account venerable Antiquity conſidered of ſo many preparations of Herbs, that if haply one way did not like them in adminiſtring them, the Phyſician might make uſe of another way, and ſo Men did year after year attempt more and more the preparation of ſweet Medicaments, and ſo trimmed and adorned their *Pharmacopœa*'s daily by little and little, and brought it to a better ſtate: And that is thus evident (I will now ſpeak onely of the Vegetables,) *viz.* there are to be found almoſt in all well conſti-

tuted

tuted *Pharmacopœa's*, burning Spirits, which are produced (by distillation) out of fermented Herbs, as likewise Salts, which are extracted out of calcined Herbs and again coagulated; also extracts, and (by the mediation of the Spirit of Wine) thickned Juices are extracted; also distilled Oils, and some coagulated into Balsoms. And many more preparations of this kind, and better sorts there are, which have not been of any very long standing, but have been by little and little added by good and faithfull Physicians, all which things do perform as much as they ought (or may be expected in the rank in which they are) nor ought any one to throw them clear off. But now if any one knows how ingeniously to extract the virtue of an Herb, and to concentrate it in such a manner, as that one onely drop shall be of as much efficacy as a whole cupfull of distilled Water, or as a spoonfull of Powder, Juice, Syrrup, or Conserve. Why I pray, should not one drop be in all likelyhood more willingly taken than a full Cup, or a spoonfull? That which may be done by a few, needs not be done by a great many. But haply some other will say, how can I be certain that there is a greater virtue in some drops of some good Essence, than in a whole spoonfull of dryed and finely powdered Herbs, or of green Herbs condited and beaten with Sugar, or than a Potfull of distilled waters; now this may be known by the virtue, odour, and taste, and that on this wise. If a few drops be put into a potfull of pure fountain water, and be stirred with a *Spatula*, the said water doth then exactly resemble the odour of the Herb when whole, and doth as to its taste agree with that water which is drawn out of the green Herb by distillation. If therefore the odour and taste be there, the virtue cannot be far off, besides the use will easily shew it, if both of them are in the proof compared together. And this now cannot be contradicted by any probable argument, for it is clearly evident to every one, that such a kind of Essence is an hundred thousand times more efficacious (respect being had to the quality and quantity of the same) than the Herb either green or dryed: Besides there also ariseth this benefit, that such a kind of Essence doth not at all lose any thing of its virtues though kept a great many years, whereas the other preparations and especially the distilled waters will grow musty and putrifie. But an Essence will (if warily preserved) eudure as efficacious above ten, yea an hundred years, as it was the very first day that it was made. Forasmuch therefore as these things are without controversie thus, we should rather mind the chusing of such things which being but small in quantity, are pleasanter and more efficacious than those that are of so great a bulk, which indeed are of little or no efficacy at all. There is no body will deny, but that the virtues of Herbs are widely dispersed and hidden in themselves, and for which virtues sake we are forced to take the whole Herb, that is, the dead body for that little virtue that lies hidden therein, just as if a Man instead of Bread should eat the crude wheat together with the stalk whereon it grows, which certainly would prove very hurtfull to the Stomach, and would together with its allaying our hunger corrupt the Stomach, and make it unfit for digestion. If therefore the Countrey-men who are the most sluggish and unapteſt Men of all others, have by a long course of time arrived unto and experimented this Wisedom and Dexterity, *viz.* that the Corn is not just as it comes out of the ground in its husk and stalk, at all fit for the use of Man, and do likewise well know that it is far more profitable (if the grain be first threshed out of the Eare, then ground small in a Mill, the husky Bran be separated, and then the pure Meal mixed with a little water and Salt, or ferment Leaven, and so the Past suffered to ferment, and afterwards be baked) than to use the crude Corn just as it grows, why should we not use also the utmost of our endeavours to extract the most pure Essence out of medical Herbs, and so to administer them to the Sick; than to use the crude Herb as it comes out of the Earth? And this I instance onely for example sake, that it may appear that a legitimal preparation exalteth a thing into a far better state than it was before. And this may be demonstrated by sundry examples, if need required, but sure here is no body that is such an unwise Tatler as to dare to oppose it. Forasmuch then as the case stands thus, that an extracted, pure, and subtile Medicine, operates far more speedily and safely, than when prepared after the common manner, I judge it much amiss to conceal the way that leadeth thereunto, and not to give directions for the use and profit of ones Neighbour. Nor indeed can I say that this invention of preparing Essences of Herbs did proceed first of all from my self, for 'tis unknown to me what another may either have done, or is able to do. But this I know, that no body hath hitherto mentioned the same either in Writings or otherwise, and that this preparation is no where known or in use. Well be it as it will, whether or no others know it as well as I, or have known it before me, yet it ought to be accompted a good thing, that I bring it forth to light for the sake of so many sick People. And it would have been much more acceptable unto me, if any body else had published it before me, and had eased me of this labour. But that I may return to my purpose; I will begin a brief but very clear description of the way whereby the virtue of Herbs is to be extracted and concentrated, that so by this means they may be more effectually operative in Diseases, and be more commodiously administred than the crude and unprepared Herb, and it is to be done as followeth.

The Preparation of the Essences of Vegetables.

TAKE of an Herb cleansed from the Earth, and its withered and putrified Leaves, both Root, Stalk, Leaves, Seed if they may be had, as much as you list, but however let it be at the least some fifty pounds weight, for the Fermentation will not succeed so well in a lesser quantity, as if taken in a due measure and plenty. Cut the Herb, *&c.* small, pour Water hereupon as much as is sufficient to fill your Copper Still, within an hands breadth of the top, urge your fire somewhat strong, and there will distill forth a clear and well smelling Water, together with a little Oil, which you must separate from the Water by a tritory or separating glass, and reserve it apart: then take out the Herbs remaining in the Still, put more of your Herbs in, and distil the VVater and Oil as before, this repeat so long, until you have distilled all the Herbs, always separating the Oil from the Water, and keeping it apart. Now then all the Herbs being thus distilled, pour water on them again, and put thereto a spoonfull of good new Ale yeast, and let them ferment together in a woodden Vessel covered over for some three or four Days: Then when the Herb begins to leave off working,

working, 'tis enough, and is fitted to ſend forth in a volatile manner by diſtillation its moſt pure parts, *viz.* Salt and Sulphur. Stir the matter well with a ſtick, that ſo both thick and thin may be well mixed together; fill your Still herewithal, give a fire by degrees, that the Herbs burn not too, and the Spirit taſt of an Empyreume. Diſtill it with a Refrigatory ſo long as the water hath any ſavour, the which you may eaſily find by taſting it often, when the water comes forth inſipid ceaſe from the Diſtillation, keep what is diſtilled forth in glaſſes: Then empty your Still and fill it again with more fermented Herbs, even within an hands breadth of the top, diſtil thence the Spirit, the which ſo long repeat until there remains nothing of the Herb undiſtilled. Then having cleaned the Still and Refrigatory, pour hereinto all your diſtilled Spirits, and rectifie them, take onely the ſtrong Spirits, pour out the inſipid water left in the Still; rectifie the Spirit again in an Alembick in *B. M.* and it will again put off an inſipid water; and if need be repeat this rectification yet once more in a glaſs Alembick, that ſo the Spirit being exalted by a farther operation may become very ſtrong and ſubtil, and its internal Vertue may be concentrated. So then, now take the Herb from which the Oil and Spirits proceeded, make thereof ſmall Balls which dry in the *Sun* or at the Fire, burn them unto Aſhes, from which Aſhes extract the Salt with the inſipid water left in rectifying your Spirit, and coagulate it: This Salt you muſt again diſſolve with more new water and filter, and coagulate it and then it is enough. To one part of this Salt, pour two parts of the rectified Spirit, and gently abſtract it in a *B. M.* and ſo the Spirit will receive into it ſelf aſmuch as it needeth of the fixed Salt, and bring it over with it ſelf by the Alembick: But the fixed Salt holds back the Phlegm, which as yet lurked in the Spirit. But now the Salt thus moiſt, if it be again fired (or calcined) is as good as it was before. To this Spirit thus concentrated even to the utmoſt, pour an half or a third part of the Oil you diſtilled before out of the ſaid Herb, mix them together by ſhaking them well, and the Concentrated and Alkalizated Spirit will in a moment devour his ſaid proper Oil, and will all of it be converted into a clear efficacious and pleaſant Eſſence. In which Eſſence the volatile Salt and Sulphur of that Herb are united with the fixed Salt, and are to be accompted of, as a pleaſant, penetrative, efficacious Eſſence, and friendly to nature; the which may be mixed and profitably taken with any Liquor: A few drops of which have more Vertue than a whole handfull of the crude Herb. And this Eſſence being taken into the Body, doth not onely operate more efficaciouſly in thoſe kinds of Diſeaſes which the Herb ſerved for before its being thus prepared, but doth alſo (by reaſon of its ſubtil purity) more ſpeedily diſplay its Vertues, and being externally applied, doth (by its Odour) corroborate the Heart and Brain beyond all other, how ſweet and odoriferous ſoever thickened Oils, prepared with Civet, Musk and Ambergreſe; all which if compared with this Eſſence, are to be eſteemed of as a dead Body: For in this Eſſence, the volatile Salt which is conjoyned with the Oil, doth preſently introduce (or lead it inwards) and make it ſubtil, even to Admiration. And ſo this Medicine ſerves as well for inward, as for outward Uſes. And certain it is, that the ſweet Odour of any Herb, ſuch an one as by which the Heart might be comforted, as it were in a moment, doth ſometimes effect more than another comforting Medicine taken into the Body. For the Heart of a Man lives of the Air, as a Fiſh doth in the VVater, the which being pure, the Heart becomes alſo well thereby, and ſo on the contrary ill. Why ſhould a Man love to ſmell a Flower, did not the ſweet Odour comfort his Heart and Brain, and were not his Spirits refreſhed thereby. If then the Flower and Herb effecteth thus much, where the ſweet and comforting Spirits are as yet encompaſſed, involved, wildly diffuſed, and tied to their dead Body; what will the Spirit do, being ſeparated from the Body, highly depurated and again concentrated. Beſides the daily, and (to all) well known experience, that a pleaſant Air refreſheth the Heart, but a corrupt and infected Air (as is evident in the time of the Plague, doth (on the other hand) debilitate it, and plainly ſuffocate it; It might be an eaſie matter to produce Hiſtories to prove and verifie the ſame, but that it would be too tedious But yet I muſt needs ſet down here one or two memorable ones, for the better confirmations ſake of my Opinion. *Joſephus de Acoſta* an acute and very expert Philoſopher, of the Order of the Jeſuits, wrote a Book of the Condition and Property of the Iſles of the Weſt *Indies* newly found out, and amongſt other things in the third Book, and ninth Chapter, ſpeaks of things no leſs incredible than true, concerning the nature of ſome Winds which (in ſome Provinces ſcituate beyond *Chili*) leap down as it were from the Tops of Mountains and Deſarts, and ſaith of them, that theſe Winds, do (by reaſon of the notable piercing cold) not onely caſt or throw down for dead, the Paſſengers paſſing that way, who not dreaming of any ſuch thing are not well provided againſt it, but doth alſo wholly kill ſome meerly from that moſt ſubtile Cold, ſo contrary and extremely inimicitious to the Spirits and Life of Man. For even as a pleaſant and temperate Air doth preſerve and cheriſh our vital Spirit, and nouriſheth it; ſo on the contrary an intemperate and cold Air, doth ſuffocate and kill it: The which thing is wont to happen to ſuch as ſail at Sea, for there the Air is infected by the motion of the ſalt Sea, and doth ſo affect and debilitate thoſe that are unaccuſtomed thereunto, and eſpecially their Brain, Heart, and Ventricle (as we ſaid above concerning the cold Wind, in the Deſarts about *Chili*) that it cauſeth men to vomit, their Head and Heart pains them, they loath both Meat and Drink, until they are accuſtomed to the Air, and can well brook it. Beſides this ſtory I will yet add another, to ſhew that an infected Air can bring more detriment to the life of a man, than any corporal Poyſon. For a corporal Poyſon invades the ſtomach onely, which by the help of Nature doth eaſily expel the ſame again, which is ſufficiently witneſſed by all well known Hiſtories, *viz.* that a man caſts out by vomit a Poyſon that is drunk down inwardly, but that ſpiritual Poyſons do haſten to the Heart, to ſuffocate the vital Spirit, unleſs a man be well armed, and this ſhall be inſtanced unto you by the following Hiſtory.

About ſome 30 years ago, there were two Mountebanks at *Paris*, that had their ſtations not much diſtant from one another, and they did each of them to their utmoſt commend their own Treacle which they ſold to the Inhabitants, thereby to diſparage each other, and each to allure the men to himſelf onely. But at laſt they came to a bargain betwixt themſelves, which was this, each of them ſhould defend himſelf with his own Treacle, againſt the Poyſon the one

ſhould give unto the other, and thereby defend the excellency of his Medicine. Well, one of them takes a huge Toad, ſwallows down one half, gives the other half to his Companion to devour, the which he alſo ſwallowed and neither of them hurt. The next day following, the other invites his Adverſary and uſed this Stratagem. He took a Viper, together with a Toad and put them into a Drum, adding hereto an handfull of Salt, and ordered the Drum to be beaten a while with Drum-ſticks, with which unwonted noiſe both the Serpent and Toad being enraged, breathed forth their ſpiritual Venome, and filled all the Drum herewith: This done, he bid his gueſt put his noſe to the hole of the Drum, which is uſually about the middle of it, for the letting forth of the ſound, who as ſoon as ever he had drawn in the ſpiritual Venome, fell backwards and died preſently, not dreaming any ſuch matter, nor underſtanding that the ſpirits either good or bad have as effectual operation upon the body, as a corporal Poyſon hath.

I have not inſerted theſe two ſtories, to fill the Paper up with words, but to ſhew, that Spirits being ſeparated and freed from their bodies, are in there virtue and operation an hundred times ſtronger than the bodies themſelves are, though conjoined with their Spirits. The which thing doth as well take place in ſuch ſubjects that are wholſome and friendly to Man's nature, as in theſe here rehearſed. It is abundantly known how many good and ſubtile Spirits I have deſcribed for the ſake of the Sick, in my ſecond part of Philoſophical Furnaces; yet few are here to be found that ſet about the preparation of them. Amongſt which Spirits, that of *Sal Armoniack* is not the meaneſt, which (becauſe of its penetrating and temperate heat) doth exhibit a moſt preſent operation, and is a Spirit worth all Men's knowledge, and worthy every where to be had at the Apothecaries Shops. Yet I have not as yet ſeen it any where to be had, though I deſcribed a ſhort eaſie way of preparing of it: But of this (if God will) more ſhall be ſpoken in the next part, where we treat of ſuch Medicaments as are prepared out of Animals. Such as are their volatile Salts, and fixed ones, wherein a great virtue lieth hidden, and are (in ſome caſes) to be far preferred before thoſe Medicaments that are made out of Vegetables. But yet though it be thus, I cannot but admoniſh here that good and ſubtile Medicines are to be circumſpectly uſed, and not to be adminiſtred to the Sick in a greater quantity than their nature will bear. Good and ſound Wine is able to comfort, and conſerve in health, the Heart, Brain, and whole Body of him that uſeth it aright. Whereas another that uſeth it immoderately, even the ſame Wine is able to inflame and infect his Lungs and Liver, to poſſeſs his Head, to bring a trembling into his Hands, and a Gout into his Feet, to weaken his Sight, and to fill his Reins and Bladder with the Stone; and for this end it was never given by God, nor gotten with ſo much labour, but was created onely to ſerve for the health of Man. O what curious ſecrets do lie hidden in the Wine onely (not to ſpeak of Corn and other Fruits) all which the World neither knows nor cares to know, and I have determined with my ſelf to publiſh, in my Vegetable Work, but yet it is at the pleaſure of God, whether he will permit ſo to do or not. It is ſufficiently manifeſt by Wine alone, that the abuſe of a thing hurts not the abuſed ſubject, and the ſame may be ſaid of other penetrating Medicines, whoſe operation is according as you uſe them. We do not ſuffer a Child or a Fool (neither of which are *compos mentis*, to meddle with a ſharp Knife, for fear leſt they ſhould hurt both themſelves and others too; but now a Wiſe Man uſeth it aright, and knows how to employ it both to his own and the uſe of other Men. If then one hurts another with a Knife, the fault lies not in the Smith that made it, becauſe he gave it ſuch a keen edge, but in him rather that uſed it amiſs.

Thus much I judged it worth the while to adviſe you of, leſt haply ſome of the Eſſences which I have deſcribed, ſhould undergo a wrong cenſure, as if they were too hot, but if they ſhould, it may be known what anſwer to give. For I confeſs that too much heat doth as well extinguiſh the Vital Spirit (ſeeing it is a temperate warmth that is its life and nutriment) as the cold, which is an enemy to nature: and therefore you are here taught not to drink down theſe fiery Eſſences as if they were your ordinary drink, but they muſt be wiſely adminiſtred, *viz.* 1, 2, 3, or 4 drops at a time according as the Patient is, in a ſpoonfull of Ale, Wine, or other liquors. And ſo the Medicine penetrateth through the whole body, and performeth that effect which God hath given it. But this is to be known, that the force and eſſence of all good and wholſome Herbs conſiſteth of heat, the which (by how much the more it is dilated and diffuſed throughout the body of that Herb, ſo much the leſs obſervable is it; and by how much it is contracted, by ſo much the more viſibly and ſenſibly is it apprehended. Whatſoever yields a temperate heat, is acceptable and wholſome to nature; and contrarily, whatſoever refrigerateth too much, all that is inimicitious and deadly, and this even every one, to whom nature is in any ſmall meaſure known, is enforced to acknoweledge.

The death and deſtruction of the life of Man, is no other thing ſaving a diſſimilitude and contrariety, whereby that which is alike and temperate is deſtroyed and diſſipated, whether it be done by too much heat or too much cold, 'tis both on the ſame manner. Too much heat doth exhauſt the ſtrength out of a Man's body, juſt as a great fire draws to its ſelf a leſſer. But a mighty cold drives the ſpirt and life of a Man to the heart, and is worſe than the heat, but yet more inſenſible, and this is clearly evident in Wine, which being ſet in a Veſſel at the Fire, the Sun, or ſome warm place, the heat draws to it ſelf the ſpirit and life of the Wine, and leaves behind an inſipid or unſavory matter, becauſe like covets its like; but if a Veſſel filled with Wine, be ſet in an intenſe cold, that cold doth not attract the Spirit as the Fire did; but hates it as being unlike it, drives it into a little room into the center of the Veſſel, ſo that having broken the Veſſel and ſeparated the Ice, the ſpirit will be found whole by it ſelf, which otherwiſe, and in the heat did aſcend and might be caught in a Receiver ſet hereto. So then, the Spirit is conſtrained as well by too much cold, as by too much heat to forſake its Soul and Habitation and leave it to the power of Death.

And many things might be ſpoken both of the nature of heat and cold which are underſtood but by few. There lies hidden therein great *Arcanums* which is not at all fit for the contemners to be acquainted withall. An hot and temperate Air, and the light of the day being diſperſed widely or afar of, are the graces and virtue of God. But the concentrated hot Air and Light of the Day, what can

can they be elſe but God himſelf, the Habitation of pure Spirits. The darkſome and cold night is nothing elſe, but the emitted and widely diſperſed or dilated curſe and wrath of God. But the concentrated and dark night is nothing elſe but the eternally mortifying power and center of all evil, and Habitation of evil Spirits, where is howling and gnaſhing of Teeth. Do but a little conſider, what is it that a little concentrated handfull as it were of the Sun will not do? will not the heat kindle Wood, as it were in a moment, and melt Lead and Tin? what would not the Sun do if intercepted the breadth of three or four paces? without doubt it would ſuffice to melt Iron and Copper. But it exceeds all underſtanding to gueſs if the ſhining Sun were concentrated a miles breadth what would it then do But yet it is likely that it would burn up the whole World in a moment, and make it vaniſh away in ſmoak, ſhould the Sun ſhine on it in this wiſe. This may be demonſtrated by the contact and union of the Sun's beams in Concave one a burning Glaſs. And if we are unable to behold the light of the Sun, when a little collected by ſome inſtrument becauſe the brightneſs thereof is ſuch, as to hurt the Sight; who is able to ſtand before the Sun it ſelf, (and yet he is but as an egreſs or out-gone virtue of God) much leſs before God himſelf who is the Center of light. And could the darkneſs be ſo concentrated as the light is, what an incomprehenſible and dreadfull monſter (ſuch as Death, the Devil, and the infernal Pit are) ſhould we ſee, which God in mercy prevent. For by how much the fairer, excellenter, and more unutterable the concentrated light is, (as being the divine preſence and clarity by ſo much muſt the concentrated darkneſs be the more horrible and more dreadfull, for theſe two are contraries. I may haply have made too wide a digreſſion, but yet theſe things are well worth your conſideration, that ſo it may even from hence appear how little the nature of man is able to abide the extreams and centers of either heat or cold, for either of theſe is a death and poiſon, but their temperature is the life of a man. Foraſmuch therefore as a Phyſician ought to be a Philoſopher and Spagyriſt, and ſuch an one who hath nature in his hand and power, it is not difficult for him to find out a true temperature, which may give to nature that which ſhe deſires and ſtands in need of. Thus now it is hereby proved, that my Vegetable Eſſences are not to be therefore ſhunned, becauſe they are in themſelves hot, for then we might upon the ſame account ſhun God too, who in himſelf is a conſuming Fire; but it lies in the Phyſicians hands to temperate and moderate theſe kinds of Eſſences with proper and ſuitable vehicles, according as beſt conduceth to the help of the Sick.

Moreover the external uſe of thoſe Eſſences is very notable in the cold affects of the members, in which caſe they are a preſent help: for the volatile Spirit is as it were a leading vehicle to the Oil and volatile Salt, and the uſe of them is pleaſant, if a little Cotton be herewith impregnated, and ſo put to the Noſtrils and ſmelt to. It doth moſt notably vivifie (in time of infected Air) and comfort the Spirits, preſerves the heart from the corrupt Air and contageous Vapours. It doth alſo correct and refreſh the pent up Air in Parlors and Chambers, *&c.* if the Glaſs wherein they be, be opened and expoſed to the Air, from whence the ſubtile Eſſence may be without ceaſing diffuſed into the Air, and make the room ſmell ſweet. So that whoſoever is already in the room, or goeth hereinto will be refreſhed with the friendlineſs of the Odour. Nor are they very dear neither to him that knows how rightly to prepare them, and is not to ſeek in manual operations.

But now this method (which I have ſpoken of) ſerves for ſuch Herbs onely as may be had freſh and plenty, and not ſo well for forreign Herbs, dried Spices, Woods, Seeds, and Roots, for they require another way which is as followeth.

Proceſs for Spices, &c.

FOraſmuch as that extraneous well ſmelling Vegetables are not every where to be had, as our home grown Herbs are, we muſt deal more ſparingly with them, and that on this wiſe. They muſt be powdered, and to every pound muſt be put five or ſix pounds of common water, and be macerated ſome three or four days in a warm place (whether it be Root, Wood, Herb, Seed, or the like) then put them into a Still and by Diſtillation draw according to Art ſome part of the water, and there will come forth together herewithall an Oil of that Herb or Fruit, which you muſt ſeparate from the waters and keep by it ſelf, untill you get the Spirit and volatile Salt alſo, the which are to be joyned with the Oil and be converted into a ſweet Eſſence. Then take out the water that remains together with the Vegetable out of the Still, put it in a wooden Veſſel, and add hereto the water you diſtilled and put thereto ſo many pounds of Sugar as the Vegetable weighed. When your Sugar is diſſolved in the Water, mix therewith new Ale-yeſt, and let it ſtand in a warmiſh place, and the Spice will ferment as if it were a new Herb; when it hath done working, put it into your Still, and it will yield a Spirit, like as the new freſh Herbs did, and ſuch an one as will both taſt and ſmell ſtrong of that Seed or Wood you diſtilled, the which you ought to rectifie as is ſaid before: the reſidue is to be burnt into aſhes, the Salt is to be extracted, and the Spirit to be thence diſtilled, with which the Oil is to be conjoyned according to the before preſcribed weight.

N. B. Now foraſmuch as the out landiſh Spices can ſcarce be diſtilled in quantity enough at one time onely, ſo as to yield Salt enough out of the remainder thereof, it will be well enough, to uſe the Salt of another Herb, inſtead of its own, or in defect of that too, you may uſe highly depurated Salt of Tartar as a ſubſtiture, but yet it is better to uſe its own proper Salt, provided it may be had.

This is the true and genuine deſcription, how the Eſſences both of our own home-grown Vegetables, and likewiſe of forreign and dry Vegetables are to be prepared. Now remains that we deſcribe the virtue and efficacy of the prepared Eſſences; and this I could do, would it not be too tedious, *viz.* to deſcribe the virtues and efficacy of the ſeveral Herbs. But ſeeing there are already Books that are full thereof, I look upon it as ſuperfluous to repeat the ſame, but refer the well minded Reader, to thoſe kind of Herbals which treat of the virtues of the ſaid Herbs. For whatſoever virtues the Herb either green or dry abounds withall, its Eſſence poſſeſſeth the ſame much more excellently, as being what is brought into a ſmall compaſs, and ſo multiplied: whereas otherwiſe a good part of the Herb goes to the ſaid contained vertues; eſpecially of our Herbs here in *Germany*, in which the vertue is widely diſperſed, and it is there-

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fore far more adviſedly done to collect them into a narrower room, that they may be the more commodiouſly adminiſtred. This moreover is well worth the noting; *viz.* that we can ſearch out the Vertues of all Vegetables by their Signature, far better than by reading thoſe Books that are compoſed of ſcraps from one, and ſcraps from another *&c.* Neither is it ſo well always to acquieſce in the Writings of the Ancients, who alſo remained ignorant of ſuch things as God taught them not, by nature. Pray what Maſter is there of knowledge that never erred from the truth? and who is it that you can in all things ſafely truſt?

O! I could wiſh, that we could but reade, and underſtand the Writings and Signs of the ſaid Herbs, by which it ſpeaketh with us, we ſhould not need ſo many ſeducing Books. Who I pray exalted *Moſes*, *Daniel*, *Joſeph*, *Solomon*, and many other Philoſophers, to ſuch an height of Wiſedom and Art? It was onely God, who yet lives and can at any time eaſily doe whatever he formerly could: who can doubt as touching him, when God minds the enlightning or bleſſing of any one with his Gifts, he makes no uſe of any Books, for this purpoſe, and ſo inſtruct out of them, nor doth he diſpute or controvert with him. We ſhould ſeek unto this Maſter and learn from him, and not out of the elegantly written *Arabian*, *Græcian* and *Latine* Books. But now the world is come to ſuch an height of pride and errour, that it can neither believe nor comprehend that any one can learn ought but in the Schools, and yet the moſt expert and moſt famous men that ever lived in the world, arrived to that famous light of nature without making uſe of the Schools, and the things that they wrote, they did not publiſh them in a ſtrange Language, but in their own Mother Tongue, as is ſufficiently evident. And this is the ſaying to this very day, *viz.* Whence hath this man his underſtanding, and was never bred up in the Schools? I knew him from his youth, and that he had nothing in him. Alas good Sir, you are very wiſe. Brought you with you into the World more than I did? Were not you born a naked Infant as well as I, and that skill which any one hath, received it he from his Parents, hereditary? Is it not the gift of God, whether it be much or little? Art doth not conſiſt in the variety of ſtrange Languages, but in experience. It is one Art to underſtand and ſpeak ſeveral Tongues, it is another Art to calculate the Courſe of the Sun, Moon and Stars, and to predict from them the Changes of Times and Seaſons. Again, it is another Art to prepare and purifie the Nature, Properties, Vertue and Efficacy of all the Vegetables, partly for the conſervation of the Life of Man, and partly for diverting accidental Diſeaſes, and to know how to uſe them as need requires. Beſides it is another Art, to get out of the Earth thoſe many rare kinds of the wonderfull Creatures of God, and thoſe Fruits of the Earth as the Minerals and Metals, for Man's uſe, (which is the End they were created for, and which we cannot want) and to depurate them by the Fire, to tranſmute them out of one form into a nother better form, and to have the knowledge, underſtanding and experience of them all.

As concerning the ſignature of Herbs, by which God teacheth us their hidden Vertues, many things might be ſaid, and it were to be wiſh'd, that ſuch a knowledge were earneſtly deſired, and ſought after by all thoſe that deal in Phyſick, and do thencefrom get their food, there would not then be ſo much need of troubling ones Brains with ſo many forreign and domeſtick Writings, where you ſhall find one gainſaying another, and ſo leave they as doubtfull what party we were beſt addict our ſelves unto and believe; but now we may eaſily find out the certainty and truth by their ſignature, and diſtinguiſh what is erroneous, and proceed on with more ſafety in all the practiſe, yea and in time too (by God's permiſſion) come into a far better State. And here you are to remember, that the ſignature of Herbs, do ſhew a Phyſician their Vertues as well as Books do, for indeed they rather trace by-paths, than walk in the way of truth. And here would be a very convenient place to treat of the ſignatures of Vegetables, but forasmuch as I have written a peculiar Book concerning them (which God willing) ſhall ſuddenly come abroad, let the friendly Reader have a little patience and expect it, wherein he ſhall find things wonderfull and unheard of.

But that there may appear ſome footſteps thereof in this firſt part, *viz.* by what means you are to meet with Diſeaſes by the Eſſences which I have deſcribed above, I could not omit the reckoning up of ſome ſpecifical ones, which I have proved by moſt certain experience to be good againſt ſome principal and well known Diſeaſes: That is to ſay, in the Gout, there is Hellebore but eſpecially Helleboraſter (which is a kind of Ellebore) the *German*'s Tobacco, and the Tobacco of the Weſt *Indies* are a ſingular ſpecifick and moſt notable aſſwager and helper in all Podagrical griefs. Now the Phyſician ſhould know and underſtand, what the reaſon is that Ellebore and Tobacco ought to be uſed in ſuch kinds of Diſeaſes. Then for the ſtone, I commend the Eſſence of the ſeed of the Aſh [or Aſh-keys] before all other ſtone-breaking Diuretick Medicines. For verily very many men have (by that ſame Medicine) been freed and reſtored to health, who have lain ſick of it many years, inſomuch that after their death there hath not been found (in anatomizing them) not ſo much as the leaſt footſtep thereof either in their Reins or Bladder: And yet before they uſed this Medicine, they were almoſt every day pained with the ſame. This ſpecifick is made of the ſeed of Aſh, which is uſually ripe in Autumn, the ſeed you are firſt of all to bruiſe well, and then mixing water therewith diſtil it into your Still, and ſeparate the Oil from the Water, and reduce it into ſmall Morſels or Troches with Sugar, for your daily uſe. But a whole ſack full, and as much as a man can carry, will ſcarce yield you an Ounce or two of Oil: and one Ounce of this Oil will ſuffice for two pounds of Sugar, for a greater quantity makes the Sugar too unpleaſant; for the Oil of the Aſh-keys is very unpleaſant and nauſeous, inſomuch that it will provoke to vomit, if too much of it be taken, otherwiſe it performs wonderfull effects in this caſe. But now if out of what remains behind, you do (by the means of fermentation) diſtil its Spirit, and after its concentration extract the fixed Salt out of the Aſhes, and unite it with the Oil, then will you have a perfect Medicine, and moſt high ſpecifick in the ſtone. And ſeeing that we treat onely of Vegetables in this part, it will not be expedient to mix herewith the Animal and Mineral medicaments, but in the ſecond part ſomewhat ſhall be mentioned of Animals, which doth efficaciouſly bring forth ſtony and gouty Humours. Inſomuch that the Urine of ſuch a ſick Perſon, doth (after the uſe of this Medicine) being heated at the fire, coagulate (like Cheeſe or Cows Milk) in the manner

manner of natural *Calx vive* that is made out of ſtones. There is likewiſe amongſt the Minerals, one of them that efficaciouſly drives out the ſtone and gouty Humours, which alſo we ſhall ſpeak of, in its due place, *viz.* in the third part. In ſome internal affects of the Liver and Spleen, and in all concreted Blood be it from a blow, fall, or any other accident, the Eſſence of St. *John*'s wort bears the chiefeſt note: For it baniſheth away all pains, reſolveth congeal'd Blood, and healeth an hurt (or wounded) affect provided the evil be not too inveterate. As for the Uterine affects of Women, when the Womb hath taken Cold and is moved out of its place, or otherwiſe hurt, the which produceth to Women many difficult and chronical Diſeaſes; the Eſſences of Tobacco, Henbane, (of all ſorts) being applied by means of a Spunge in a Uterine Inſtrument, are a moſt certain lenative and ſure Medicine: they reſtore the *Matrix* to its place and quietude, and heal all other infirmities. In weak decrepid and decayed men, what will not the true Eſſence of Roſes and Cinamon do? if often taken, it comforts the Heart and Brain above all other Medicaments: But this Eſſence muſt be prepared, and concentrated into a narrow room, that ſo one or two drops, whether put on the Tongue, or put to the Noſe, may corroborate the whole Body by its vertue, and the ſtander by may have enough to do to admire its ſweet Odour.

N. B. If any one hath a mind to make ſuch an Eſſence, it behoves him that he firſt gets the true Oil of Roſes, which is diſtilled out of the yellow Thrums on which the Roſes grow, and not out of *Lignum Rhodium*, and is gotten out by the mediation of water (but you muſt not ferment them before you have gotten their Oil) then afterwards ferment them with new Yeaſt, whereby you may get their Spirit, for if you obſerve not this method, you will effect nothing, the reaſon is this: becauſe if you ſet them a fermenting firſt, the Oil (as being the beſt and moſt efficacious part) is mixed and united with the Spirit, and ſo widely dilated, that it will be a hard matter again to concentrate it. Well, what ſhall I need ſay more of the vertue and efficacy of the vegetable Eſſences, ſeeing that the Nature and Vertue of them is enough known already: But yet thus much I muſt needs confeſs, that I have not in all my life time ſeen any thing done, which was more ſweet, friendly and efficacious, than theſe Eſſenſes of Vegetables. For if the Eſſences are but prepared according to this deſcription of mine, we can hardly be ſatisfied with their Odour, eſpecially if made out of well ſmelling Herbs, as Roſes, Violets, Clove-gilli-flowers, Bawm, Camomile, Pennyroyal, and other ſuch like. Beſides ſuch kind of Eſſences may be made out of Gums, when their Oil is driven forth by the Spirit of Salt, (leſt elſe they ſavour of an Empyreum, and become unpleaſant) but with this Proviſo that you uſe the Alcalizated well ſwelling Spirit of of ſome other Herb, whoſe Odour is not much unlike, for the Gums do not afford a Spirit. Now there's *Aſſa Fœtida*, or Benzoin, Storax, Maſtick, Camphire, Amber, and the like, nay even Civet, Musk, and Ambergreſe may be reduced into very fair and pellucid Eſſences, by an Alcolizated Spirit, and be rendered far more pleaſant than the common Musk, Ambergreſe, and Civet: For the volatile Salt contained in the Spirit, makes the Body volatile and ſpiritual, ſo that at the opening of the Glaſs, wherein ſuch an Eſſence is, the whole room will be filled with the ſweetneſs of the Odour: But more of this in the ſecond and next following part, wherein ſhall be taught, by what means a ſweet Odour may be extracted out of our ſmall Animals in *Germany*, not unlike to Civet. What ſhall I ſay more, methinks I have done enough, he that underſtands not this, would much leſs underſtand the things that are more ſubtil, ſhould they be deſcribed. And though I could ſhew a far more compendious way of preparing Eſſences, yet haply the ingratitude of the World being conſidered, this that I have already done is too much, and if any is minded to carp at theſe here, let him firſt give us better than theſe, but they will have a care how they attempt that. For he that is endowed with underſtanding, even he alſo underſtands that the labour and diligence of another man is not in the leaſt to be diſeſteemed, for the truth will remain truth though never ſo much expoſed to injuries. And as we have ſaid, that good and efficacious Eſſences, may be prepared out of pleaſant and well ſmelling Herbs: Even ſo by the ſame rule may ill ſmelling ones be made out of bad ſmelling Vegetables and Animals, which alſo have their uſe and are profitable, as in the ſuffocation of the *Matrix*, where, (for the moſt part) ſuch things that egregiouſly ſtink are applied to Womens Noſtrils, that (by their grievous ſmell) they may impead and repreſs the riſing up of the Womb: And this doth ſometimes ſucceed very proſperouſly; theſe are *Aſſa Fœtida*, *Caſtoreum*, burnt Rags, burnt Feathers and ſuch like, which yield a moſt filthy Odour: And if now the unprepared Body, in which the Odour lies largely dilated doth nevertheleſs perform notable Operations, what would it be think you if the Oil of ſuch bad ſmelling things were conjoyned with the volatile Alcolizated Spirit? I ſay it would do more than the crude Body, not onely ten, but twenty or thirty times more. But amongſt all the fetid and ill ſmelling things, which are not inimicitious to Nature, theſe I find the ſtrongeſt, *viz.* the black Oil of Tartar, which is drawn forth by diſtillation, and that too which is diſtilled out of Goats horns, Hogs hoofs, Birds feathers, and the Hairs of all Animals, all which do ſtink extreamly, and yet are not hurtfull unto man, as thoſe ſtinks are which proceed from rottenneſs, as from dead Beaſts, Fiſhes, rotten Eggs, and ſuch like, whoſe ſtink is wholly inimicitious to the Spirit of Life, do threaten its deſtruction, and are (as much as poſſible can be) to be ſhunned. For the Heart, Brain, and whole Body is therewith infected, and debilitated. But why ſuch ſtrong ſmelling Oils as thoſe are, that come from Beaſts horns, Hairs, and Hoofs, do not perform the ſame, ſhall be told in the following ſecond part, where we will treat of Animals and of ſuch parts of them, as may be made uſe of for Medicine.

And thus will I put an end to the firſt part of my *Spagyrical Pharmacopœa*, and would have the Reader admoniſhed that (if he would uſe this my Deſcription of Eſſences) he would have a watchfull Eye by whom they are prepared, and not truſt every Body that hath ſcarce ſaluted even the very firſt entrance of Art, and yet dares to make Medicaments, and adminiſter them to others. For under this covering will be exerciſed great deceit, for ſome will not for their gain ſake, beſtow ſo much Labour and Coſts, as to make Eſſences out of good and new Herbs, but ſcrape upany thing, that thereby they might onely bring forth ſomewhat or other that may reſemble the Odour and Savour of the Herb. And although ſuch Eſſences ſhould be pre-

pared of some of the best Vegetables, yet the covetousness of profit may cause that the Spirit be in too great a quantity mixed with the Oils, which may easily be done, if to one part of Oil, five, eight, ten, or twelve parts of Spirit be taken, because the Spirit is easier to be had than the Oil, (whereas according to my prescription two or three parts are to be taken onely) and therefore may you easily conjecture, that such Essences are far less efficacious; for the greatest virtue consists in the Oil, the which being by the Alcalizated Spirit, made volatile and penetrable, is introduced (or carried more inwards.) And besides this is not all, but there may be another abuse too, as when a Man willing to spare his own labour, doth not himself make the Oils, but buys them cheap from some sweet Powder-makers, which Oils may (and sometimes 'tis so) have in length of time lost their most subtile part, and are become rank and clammy, and so makes use of such, from whence no laudable matter can be effected, as is manifest to every Body. But admit it be so, that new Oils can neither be had nor prepared with your own hand, because of the defect of the Commodity, yet may such Oils as are never so old and never so much clammy be rendred usefull, if they are first distilled and then rectified in a Retort, by Spirit of Salt: For then they come over clear, and become fit for an Alkalizated Spirit to dissolve them, which such Oils as are old will not do. This I thought good to advise, lest haply he that thinks he enjoys a good Medicine, should impute the blame to me, or lay the fault to the Essence, when the effect answers not his expectation: For thus it hath hitherto hapned to my Medicaments, and doth even to this day fall out so, *viz.* that very many (in sundry places) do falsely pretend as if they knew my secrets, but 'tis untrue, and a meer diabolical couzenage, for they administer their own unprofitable Medicaments, selling them for mine, and especially my *Panacea* and Tincture of Antimony, which notwithstanding hath no affinity with mine, and what is more too they fear not to affirm that such Medicaments are made by my universal *Menstruum* (which they neither understand nor know how to use.) And because here falls in some mention of this *Menstruum*, 'twill be expedient to say somewhat of it, *viz.* what is to be understood concerning it, seeing there are so many various opinions of the same. Most People think that the Alkahest is a subtile water, whether drawn out of the Air by certain instruments, or prepared by subtile Distillations, but in this opinion, they err. But yet I will not deny but an efficacious water may be drawn, not onely out of the Air, but also out of the most intense light of the Sun, and thus I my self have sometime done. But this moist dry *Menstruum* which I call by the name Alkahest, is nothing else but the Salt of the Earth, and may be used both in a moist and a dry form, and thus much the very Etimology of the word signifies, if rightly lookt into and read, *viz. Alkali est*, for the word Alkahest is compounded of two words, of *Alkali* and *est*, where the *l* and *i*, by a transverse line are made one lettter, *viz. h*, and is then read Alkahest, but take away the transverse line, and then 'tis read *Alkali est*. Hence 'tis manifest to every body, that I have not rashly imposed that name upon this *Menstruum*, but have thereby openly named the subject. For this very reason it will be very expedient to suspend your judgment, and not to be so hasty in uttering your opinion and censure of such a thing as you do not at all know, but rather think thus, who knows if I understand what I say or not: I may happen to say somewhat unadvisedly which may easily be refuted, the which we see here to be done. For there have been various discourses of this *Menstruum*, as if I had given it a name so famous without any ground, seeing it ariseth from Salt onely, when as the Alkahest is a subtile water. But by what I have aboveсaid it appears that I have not given it an improper name, but have called it by its peculiar Title; the which I did for the sakes of such as contend, to prevent any future controversie about the name thereof, but how it is to be used as to those secrets contained in *Miraculum Mundi*, is not to be spoken of here. Let it suffice the well minded Reader that I do again, and again assure him, that all and every of the things I have there spoken, may without controversie be done by this one onely subject, *viz.* the Salt of the Earth. And so that Treatise doth rightly deserve the Title of *Miraculum Mundi*. But yet I do again by way of Summary as 'twere, Admonish, if any one should use this my Essence, and have it not rightly prepared, he throw not the blame on me, as that I had written unprofitable things, but rather let him that has not rightly prepared it, bear the blame.

But yet 'tis not to be doubted but that men of all states or conditions will in process of time endeavour the preparing of those Essences, not onely because they are a pleasant and efficacious Medicament, but withall because of their comforting, penetrating, and highly gratefull Odour. For the crude and cold Air in pent in rooms may not onely be tempered and rendred acceptable and friendly to nature, but it may also be happily and safely made use of in external cases and Diseases, as need requires.

It will therefore behoove everyone what way he may most profitably attain them by. The preparation is easie, so he use but diligence, and then may a good quantity of those kinds of Essences of all the Vegetables and Spices which are in use in the Shops, be easily gotten. Now such an one that hath conveniencies to prepare them himself, he verily best knows what he has, and may safely trust thereto. There is also great difference in the Essences according as they are prepared; one will happily prepare them very neatly, another but rudely, but the difference will easily appear as well by its efficacy as by its sweet smell; as for instance. That Essence which is rightly prepared according to the aforesaid weight and proportion, must necessarily be very subtile, sweet, efficacious, and of a strong Odour and Savour. But if it be otherwise 'tis a sign that the Oil was two sparingly added, and it can't be accounted of as a rightly prepared Essence.

N. B. The things which I have here spoken, of Odour and Savour which the Essences ought to have, are to be understood onely of well-swelling Vegetables, such as are Roses, Marjoram, Rosemary, Violets, Camomil, for the Essences that are prepared out of these, must needs be well-smelling and efficacious. But as for those Essences which are prepared out of those kind of Vegetables that have no such notable Odour, it can't be expected that the Essences prepared from them can afford more Odour than the Vegetable had, but yet do they excite a more present efficacy, as for example. The Essence of Wine which doth easily exceed all other comfortatives is notwithstanding void of any eminent Odour, nor haply doth it resemble any other than the flower of the Vine in Spring-

Spring-time: and therefore being taken into the body, it diſplays its Virtues, but not by its Odour; even ſo, neither doth the Wine it ſelf being taken into the body operate by its Odour.

And hitherto belongs the teaching how to come to get ſuch an Eſſence, ſeeing that it is not prepared after ſuch a manner as I have delivered for the general dealing with Vegetables, and that, becauſe the pleaſant Oil of Wine (without which [oilineſs] no Eſſence can be prepared) is hard to come by. I will therefore teach the way of preparing it, but what I now write is onely for the ſake of weak and decrepid old Men, and alſo the poor, but not for the wiſelings and unworthy Deriders. For I very well know that ſome or other after he hath read this Book, will out of the good conceit he has of himſelf ſay, this is no news to me, I knew this many years ago, *Glauber* doth not publiſh this of himſelf, but hath gotten it elſewhere out of ſome old Book or other: He that thus judgeth of me doth for no other cauſe ſay ſo, but out of envy and hatred to detract from my Writings: And the anſwer I make to ſuch envious men is this. That I do not know whether any one heretofore either had, or at preſent hath either ſuch or ſuch a ſecret which I have made mention of in my Writings, or no: It may be for ought I know that ſuch ſecrets were extant above an hundred years ago, and may be even at preſent in uſe with ſome, that I know not: however that's nothing to me: For it is aſſuredly falſe, if any ſay that I have borrowed from any one, or elſe out of any old Books, ſo much as one, much leſs moſt of, or all the ſecrets (according as the envious ſay) which I have publiſhed in my *Miraculum Mundi*, or in any of my other Writings: But I obtained them through the Grace of God by the many Trials I made, ſearching after them with my Coſts and Labour. And forasmuch as ſuch envy me, therefore do they privily ſcatter abroad their lies concerning me, which will in ſhort time (God permitting) be demonſtrated. But put caſe that I did take whatſoever I have written out of others, and out of ancient Books, will they I pray be either more or leſs profitable becauſe of that, than if they were my own: Is it not one and the ſame for any notable thing to be emitted, who writes it, or whom it proceeds from, ſo that it be, and may be exceeding profitable to very many. But becauſe of this envy and calumny which I undergo from wicked men, I do keep within my breaſt many things, which otherwiſe I would have communicated for the common good. And if ſo be that they cannot believe nor comprehend what is mentioned in my *Miraculum Mundi*, (and yet is not of ſuch deep ſearch as the unskilfull imagine) how will they believe, that I ſhould ſet before them far higher things? Well therefore may the old Proverb take place, *Secret things are for ſecret Men, and fooliſh things for fooliſh Men.*

Now followeth the proceſs of preparing a comfortable and pleaſant Eſſence out of the Oil of Wine, and its fixt and volatile Salt. I think there's no body will deny, but that hitherto there hath not been made any mention by thoſe that are wont to diſtil Wine of any ſuch thing as an Oil; ſave that by thoſe that have written, that the Oil of Wine is to be ſought for in Tartar and in the Fæces, and that a black Oil may be diſtilled both out of the dried Fæces of Wine and alſo out of Tartar, I think is ſufficiently known to all Chymiſts: But ſuch an Oil doth purchaſe to it ſelf (by this way of proceeding) ſuch an ungrateful Odour, that it is merely on that ſcore, uſed neither inwardly nor outwardly, though it be endued with good Vertues. For verily I do not yet know whether there can be found (amongſt all other things) any thing that ſtinks worſe than that Oil that is prepared out of Tartar, and therewithall may'ſt thou drive away both Men and Beaſts, becauſe the Odour that it emits, is in a manner intollerable. Whereas this which I here mention, is a pleaſant, friendly, clear and bright Oil, and is made thus. In the Vintage time, when the Grapes are preſſed forth, take ſome pure Muſt, let it ferment in a Barrel, until it becomes white, and the greateſt part of the Fæces ſettle to the bottom, which done begin your diſtillation, and draw out the Spirit, either out of a Copper Still tinned in the inſide, or ſome other diſtillatory Veſſel; of the Spirit will be no great quantity. After it hath ceaſed, take off the head, and pour that which remains into clean Glaſſes, let it ſtand for ſome days, and there will ſwim at the Top a white Oil, and ſometimes it will ſettle to the bottom, the which is to be ſeparated from the Muſt, and will ſerve for the making the aboveſaid Eſſence. But the Muſt, from which the Spirit and Oil are taken, may be mixed with your other Muſt, and it will again ferment and become Wine, but if you can't do thus for want of skill, make thereof a Vinegar. This is a moſt compendious and the moſt eaſie way of preparing the Oil of Wine, and although I know another way beſides this, and how ſuch an Oil may be had even out of the Autumn Seaſon, yet doth it ſeem to me not ſo well to publiſh all things together, and at once: This way of preparation that I have now taught will to many be hard enough to effect, though it be clear enough deſcribed. And you are to obſerve, that in this work the due time of diſtillation is to be regarded, *viz.* When the Muſt is ſo far fermented, as that its taſt is neither plainly ſweet, nor plainly vinous, but a midling between both; which if neglected the fault is none of mine, for I have adviſed you of all things to a tittle. If you begin your diſtillation too ſoon before the Muſt is ſufficiently diſſolved, it affords no Oil; if you tarry too long, the Oil precipitates with the Fæces, nor wilt thou get ought, and therefore all things are to be done in their due time. But how this Oil is to be reduced, with his own Spirit, and his fixt and volatile Salt, into an Eſſence, is mentioned before, what uſe this Eſſence ſerves for needs no deſcription. For every body well knows what a vivifying and comforting vertue there is in Wine, and yet the Wine is endued but with little Oil (though the Oil as we ſaid before is the beſt part of the Vegetable) and beſides, it is united with a great quantity of inſipid Water, and crude Tartar, but the Eſſence is freed from thoſe Crudities of Water and Tartar, and is compounded of a due proportion of the moſt pure parts, or of the three Principles, Salt, Sulphur, and Mercury, and may deſervedly be called the Quinteſſence or Soul of the Wine.

Whoſoever he be that hath it, will ſee what good it is endued with, and how to be uſed. To me it ſeems to be an Antidote againſt Poiſons; for ſeeing it is written of old, that a Serpent or other venemous Animal, cannot abide in the Vineyards at ſuch time as the Vine flowreth, therefore the Oil and Eſſence of the Wine reſembling this very Odour, the Eſſence may not unfitly be thought to be good in healing contagious Diſeaſes.

But this is to be noted concerning Eſſences, that they

they must not be stopt with such things that will be melted by the Essence, but be rather stopt in with a double Bladder, lest the volatile Spirit should fly away. For should this so be, the Oil would again be debilitated and let go its Spirit,and the Essence would be corrupted.

And because my purpose was to speak of the preparation of Vegetable Essences, but not make a description of their most ample use, I will now put a period to this business, leaving every one to be wiser as his own capacity is. But yet, would the present time have permitted, I would have mentioned some specificks, which may haply be elsewhere done But thus much I say, that in Wine, lies hidden very much which but few know, and which if one would reckon up, would stir up admiration. But it appertains not to this place, but to the Vegetable Work, which (if God permit) shall soon follow. But seeing I have made mention of Wine, I cannot omit to add in this place one thing, *viz.* what yet farther use the Essences of Herbs might be of, if always to be had ready prepared in the Apothecaries Shops: For one, two, three, or more drops of Essences, being put in a Cup of Wine at pleasure and stirred about, that the Wine may be united with the Essence, do presently make the Wine clear and pleasant, resembling the kind and nature of the Essence you put in; and by this means divers kinds of Wines may presently be made out of one and the same Vessel, to refresh and please your guests: And this way far exceeds the using of extracts, which make the Wine troubled, but this leaves it clear. It will be needless therefore to put different sorts of Wines in several Vessels in Cellars, where they will all of them by degrees wax weaker and weaker, unless they are kept always full; but one onely Vessel, is sufficient for to make various kinds of Wines at your pleasure; and this is a very profitable secret for great Men and others, who sometimes must have various Wines. It is a usual thing with many to drink a draught of Physical Wine in a morning on a fasting Stomach, to strengthen the weak Stomach, and to preserve it from hurtfull Air, if they can but get it, and if they use that which is usually made of the Reliques of the Wine, and such decayed stuff, such is void of virtue, and brings more hurt than benefit. But now, having these Essences of Herbs, you may easily impregnate generous Wine therewith and make it Medicinal, and by this way maist thou be certain that thou hast good Wine, and not such as is made out of the droppings and refuse, which is usually employed to make Medicinal Wines of, and from whence gripings and other incommodities do frequently exist: But that which is composed of generous Wine, and a well prepared Essence deserves the name of wholsome Physical Wine. These things I was willing to add to this first part of my *Spagyrick Pharmacopœa* by way of Ornament, and do request the well minded Reader, that he think well of my Labour, Diligence, and Intention. There shall follow (God permitting) in the two next parts, more good Medicines.

The End of the First Part.

THE

THE SECOND PART OF THE Spagyrical Diſpenſatory.

Concerning the preparation of Animals, Vegetables, and Minerals, by an Univerſal Diſſolvent.

Wherein is clearly demonſtrated and exactly deſcribed, that Niter is the true Univerſal Diſſolvent, and how all Vegetables, Animals, and Minerals, are therewithall diſſolved, corrected, and their venemous and obnoxious property changed into wholſome Medicaments, contrary to the opinion of many ignorant Men.

What Animals are, and what is underſtood or meant by them.

I do here underſtand by the name of Animals all ſuch things as have life, and a vital motion, as Men, all kinds of Beaſts, Worms, and Inſects, either in the Earth or above the Earth, the Fiſhes in the Water, the Birds in the Air, and all the Creatures that can move themſelves, and that do partake of a viſible life. Amongſt theſe living Creatures, there is this difference to be obſerved, *viz.* that ſome of them ſerve for the uſe of Medicine; other ſome of them are not fit for Medicine; for all thoſe Animals which nouriſh mankind and ſuſtain his body, have not a medical but nutritive power, ſo that out of them can't be prepared Medicaments reſiſting Diſeaſes. For although that out of ſome Animals (as Oxen, Sheep, Goats, Hens, Birds, and ſuch like) a good Eſſence may (by the benefit of Art) be extracted, ſo as to reſtore and ſtrengthen a body that is debilitated by ſickneſs (as you may ſee in my Book of the Kitchin Art) yet that labour doth appertain to the Kitchin, and Cooks, rather than to the Apothecaries. Therefore in this Treatiſe nothing elſe ſhall be mentioned, but concerning ſuch Animals onely as do not nouriſh the body of Man, but (being eaten or any ways entring into Man's Belly, or other parts of his body) do by their venome moſt greatly hurt: But being inverted or turned in and out by the Spagyrical Art do become excellent Medicines, and (without that bettering them) would remain venemous and hurtfull: ſuch as theſe are Vipers, Serpents, Toads, Scorpions, Spiders, and other venemous Inſects; the which being ſpoiled of their venome or changed by Art, do become Medicines of a penetrative efficacy. Indeed a Serpent, a Toad, and other like venemous Creatures being onely boiled in common water, are barred of their Poiſon, and may be eaten without any hurt, ſeeing that their Poiſon conſiſts not in the Fleſh, but in the Spirt, and vaniſheth by a bare decoction. Many examples do confirm this thing, and 'tis evidently known that Serpents have been oftentimes boiled and eaten inſtead of Eels. It is no new thing in *India*, that that People do feed on great Serpents boiled, inſtead of Food, and contrariwiſe other Animals there are which do not depoſite or lay aſide their venome by a bare boiling, but do retain it, ſuch as are Scorpions, Tarantula's and ſuch like. But now, if to ſuch kind of Vermine that are endued with ſo hurtfull a Poiſon, a water or liquor of a ſtronger efficacy be added, wherein they may be digeſted, their venome is turned into a wholſome Antidote, and is a reſiſter of Poiſon, as ſhall be proved anon. This is certain, that the omnipotent God hath not created ſo much as the leaſt Worm in vain, which cannot bring ſome profit, though by the under ſort of Men, it be contemned and plainly neglected. But foraſmuch as almoſt all ſuch Vermine and Inſects, are (by reaſon of their Poiſon) rarely uſed in Medicine, and ſcarce any one knows their occult virtues, from that ſignature God hath given them, or cares to know, the uſe of them remains unknown and in the dark. Nay it is well done, that (ſeeing the way of correcting ſuch Poiſons, or turning them into Medicine, hath lain hid from the greateſt part of the Learned ones) their uſe was thrown out of the Apothecaries Shops. But yet in proceſs of time, ſome of thoſe kind of Vermine were admitted by the Phyſicians, as the Scorpions, Cantharides, and ſuch like. The Scorpions being ſuffocated in Oil Olive do tame their own proper Poiſon; Cantharides, great Worms, and Milli pedes, or Pigs-lice, are uſed to provoke Urine. But yet not without danger, becauſe of the venome they abound with. Nevertheleſs Men have dared to uſe them, and many times they have proved very pro-

firable But had their bettering been known ; and had they (being thus corrected been made uſe of, they would (without all fear of danger) have procured a greater honour to thoſe that uſed them. Now the uſual way of all ſuch as know not the manner of correcting them, ſuch little Animals are dried, and (crude as they are) beaten into a powder, and ſo adminiſtred to the ſick, and do ſometimes (though with mighty hazard) perform great cures. Were the ſignature of ſuch Vermine well examined, and their uſe in Medicine well known, and they were afterwards tranſmuted and changed (by the help of an univerſal Diſſolvent) into a ſafe Medicament, they do then become ſuch ſafe and effectual remedies, as to take away moſt grievous, (and in the accompt of ſome plainly incurable) Diſeaſes, and do in many Degrees exceed the weak operations of Vegetables. For the Animals which God hath gifted with life, are of a far greater efficacy than the Vegetables, and this any one will not be over hard in believing of. You will find many wonderfull things in my Book of the ſignature of Animals, Vegetables, and Minerals (which ſhall ſhortly come forth to light) nay and beſides their ſignatures, as well their unknown and occult Vertues as their known Vertues ſhall be herein declared. But in this Treatiſe, ſhall onely be mentioned ſome of the principal ſmall Animals of uſe in Medicine, *viz.* by what means they may be reduced into moſt excellent and moſt ſafe Medicines, by the help of the univerſal Diſſolvent. As for their Vertues, and Efficacy, the well minded Reader may ſearch for them in my other Writings. And although I have met with admirable Vertues in ſome hitherto neglected Vermine, and would have alſo deſcribed them for the profit of my Neighbour, and ſo purpoſed to have made a large diſcourſe concerning them ; yet the love to my Neighbour (whom I would not willingly lead about in many erroneous Turnings) hindred me from performing it. For all the Vertues that are apart diſperſed amongſt all the Vegetables and Animals, are all of them concentrated in one Mineral, and found perfectly united, ſo that there's no need of uſing ſo many diſtinct Medicines of Vegetables, Animals, and Minerals, and therefore I refer the Reader thereunto. But yet for ſatisfactions ſake of ſuch who abhor ſuch Medicines as are made of Minerals, and dread them as if they were a Poiſon, I will detect the Vertue and Power of ſome of the moſt principal ones in Medicine.

Of the Signature, Property, and Medicinal Vertues of the Bull-like and Horned Scarabæus *or Beetle.*

I Have known ſome of the biggeſt and flying *Scarabæus's* that have weighed half an Ounce, or a whole Ounce, and of a Cheſtnut Colour, and they will firmly ſtick to any thing by reaſon of their ſharp Feet, and are furniſhed with double Wings, the upper ones are hard and ſmooth like an horn, the under ones are very thin and tranſparent, and ſhew like the dried leaves of Poppy. The Male is for the moſt part bigger than the Female, and is armed with two horns, which in their branchings reſemble the Figure of Stags horns, hard and ſmooth like horn, and hollow on the inſide, without any marrow, with theſe he defends himſelf. If you put one of them on a Table, and ſmite him often with ſome ſmall twigs, and enrage and provoke him to anger, he doth not run away like as other Animals do, but ſets upon his Enemy, with his upright and variouſly branched horns, as if he would revenge himſelf for the injury done him ; and whatſoever you reach out to him, he preſently ſnatcheth with his horns, and holds it ſo faſt, that 'tis a hard matter to get it from him : If the thing be too heavy, he then leaves it, and goes his way without it: But if it be light, he carries it away with him, and afterwards unlooſeth his horns from it and lets it fall. The Females two horns are leſſer and crooked, which open and ſhut like Pincers ; whatſoever they ſeize on, they hold it moſt firmly, and if you expoſe to its horns any thing that is not hard ſhe doth gripe it ſo long, till the tops of her horns touch each other. Being hanged at a Cats or a Dogs Ear ſhe preſently pierceth it through, and ſo holds that the Dog can't caſt her off with her Feet, but (not knowing what is happened to him) runs to and fro, howling and crying out, as if he implored help from ſome body elſe, ſuch is the innate anger and malice of this ſmall Creature. They feed not upon Graſs and the Leaves of Trees as other *Scarabæus's* do, but are nouriſhed with the Juice of the thin ſoft reaſinouſneſs which is in Summer Flowers out of thoſe Trees that bears fruit with ſtones in them, ſuch as Nuts, Cherries, Plums, Pruens, Peaches, and ſuch like. Theſe Trees they ſticking faſt on, do by ſucking out the Roſin thence flowing, ſupport their lives withal. Theſe ſmall Creatures are truely Martial, and as if they were endued purpoſely by nature with Weapons, and armed. Some men do break off their horns, and carry them about them, as if they were a ſafeguard againſt the invaſions and being ſet upon by wild Beaſts, but I count this as ſuperſtitious. Some (I know) do reduce them with their Wings into pouder, and make uſe thereof, and have healed the inward pains and prickings of the Body : And have cured Quartanes, yea have in all Feavers hanged it about the Neck ; but yet I believe it would bring more profit, if it be duely prepared and ſo taken into the Body. But what effects they will perform in the other parts of the Body I know not, nor have I hitherto tried or known them to have been uſed to any other intent than before mentioned. But I am certainly aſſured, that there is a moſt wholſome Vertue in this inſect, becauſe of his thus living on, and being nouriſhed by thoſe reſinous Juices which flow out of ſuch Trees as bear thoſe kinds of Fruits that have Stones in their inſide : Wherefore I think that their whole Body is of a balſamick Nature, and I do judge by their ſignature, that they may be profitably uſed in curing all inward and outward hurts ariſing from beating, wounding, ſtabbing, and ſhooting, if they are firſt reduced into an Eſſence according to my method. The horns and thoſe hard wings, may be reduced into a Magiſtery, apart by the univerſal Diſſolvent, and ſerve for inward Uſe. And the body being on like manner prepared, may be applied and made uſe of for the allaying of all griefs, or pains both externally and internally. Without doubt it aboundeth with many other hidden Vertues which are unknown both to my ſelf and other men.

Of the Pilular or Globular Scarabæus.

THERE are other *Scarabæus's* uſed in Medicine, *viz.* the black and globular ones, uſually abiding in Horſe dung, and alſo thoſe that live in Oaks, and be of an aſhy Colour, and are pleaſant food to Poultry,

Poultry, who by feeding on them do lay abundance of Eggs, but the black ones they abſtain from, and do not eat them. I know not whether or no theſe laſt mentioned (*viz.* the Oak ones) are any thing at all helpfull in Medicine. But yet thus much they do, if they are bruiſed and applied to the bare skin they cauſe Puſtles, and ſo do thoſe too that are called golden *Scarabæus's* that are uſually on Roſes, and Elder-flowers. Both theſe ſorts have this property internally and externally, and ſo have the *Cantharides* or thoſe green Flies called Spaniſh Flies, and do moſt vehemently provoke Urine. If now theſe are by Art changed, and their venemous quality taken away, they are profitably uſed, and ſafely, in curing the Gout, Stone, and other grievous Diſeaſes and bring a great deal of benefit. The black and globular ones are martial, and are not much unlike to the horned *Scarabæus's*; the aſhy ones are of a Saturnine nature, the green ones of a venereal Quality, and the red and little ones are of a ſolar property. Theſe laſt mentioned, are by the *Germans* called Golden and God Almightie's Birds, and ſome do boaſt that they have gotten out from them good Gold, and put it to the Teſt, which to me doth ſeem unlikely. I will not deny but that there lieth hidden in them a ſtrengthening Cordial (as they call it) properly for corroborating a man's heart if a preparation or correction preceed, I ſhould be unwilling to make uſe of them crude and unmended. Beſides the aforeſaid reckoned up *Scarabæus's*, there is yet another kind of black ones which creep along the Graſs in the Months of *May* and *June*, and cannot flie as the above mentioned ones can, and yet have little Wings. Theſe are exceeding ſlow creepers, and being put upon ones hand, do turn out a ſtrong ſmelling Liquor, and are called *May* Birds, and the Worms of Fat by the *Germans*; the *Latines* call them the uncteous *Scarabæuses*. They operate moſt efficaciouſly, and are uſed by many for curing thoſe moſt grievous Diſeaſes of the Gout, Stone, Leproſie, French-pox, and Dropſie, one two or three Grains of them being reduced into powder, are uſually adminiſtred, in ſome proper Vehicle. They do moſt vehemently expel Defilements, by vomit, ſtool, and Urine, inſomuch that the Urine of the Gouty, Leoprous, or thoſe that are afflicted with the Stone will be coagulated like Milk, or will become tenacious, and wax hard like a ſtone, the which event may well aſtoniſh any one to conſider of. I know very many that have had the Gout, and been cured of it thereby, though I confeſs it is a Medicine ſomewhat hazardous becauſe of the force of its operation. But if it be firſt corrected by the Univerſal Salt, it may be moſt ſafely afterwards uſed in the curing of the ſaid Diſeaſes. *Wierus*, a very learned Phyſician, did heretofore publiſh a Treatiſe of the wandring Gout, and highly commended this *May* Worm, ſo called by ſome: And likewiſe the great common Earth-worms, for curing it. Neither is it without ground that this Worm [or *Scarabæus*] we mention, far exceed all the reſt of them that are endued with Virtues, healing Diſeaſes. The *Cantharides* come far ſhort of it, and the sky coloured Flies, which are formed onely in Carkaſſes, are far ſhort of the *Cantharides*. In the next place follow thoſe greater Flies, that uſually ſtay in men's houſes, and keep buzzing about till they can find ſome raw Fleſh, whereon they caſt their filth in the likeneſs of ſmall Eggs or Knits, which become VVorms in a days time. And I do believe that there is ſcarce any Creature endued with a ſmelling ſo acute and ſubtile as this Flie, and upon that account I do not queſtion, but that it would ſhew its Virtues in hidden Diſeaſes. Yet I would not be any man's Authour or encourager to make uſe of him, becauſe nature her ſelf cannot by any means endure (when a man by chance eats the fleſh that is defiled with their Excrements) their filth in the Stomach, but doth preſently caſt it forth by vomit as that it were a Poiſon. I aſcribe to theſe Flies a mercurial Nature, and I likewiſe affirm that there are in the common Worms medicinal Virtues. For they do ſtrongly expel by Urine and Sweat, and being made uſe of, crude as they are, they provoke to ſtool, and cauſe vomiting. But I verily believe, that being corrected by the univerſal diſſolvent and tranſmuted into a ſweet Eſſence, they will become an excellent Specifick againſt Impotency, and a notable corroborative to ſuch that are tired with the venereal Sport. Their ſignature is teſtimony enough, and the Figure of their Bodies, for they will ſometimes ſtretch out themſelves at length, otherwhile contract themſelves into a ſhortneſs, one while become thicker, then preſently, and as often as they p'eaſe can they extenuate themſelves or become ſmaller, nor can any Animal do thus beſides themſe'ves. Nor know I any Animal that doth (in Coition) more firmly adhere to the Female, than this Worm, whom I have many a time ſeen, in the Spring Seaſon when the Cold is aſſwaged and the Earth again open, to join himſelf to the Female (not under the Earth) but to creep out of the Earth with half his Body, and ſo apply himſelf to the half part of the Female, who likewiſe creeps out of the Earth, and he ſo long labours with her, till there is made a thorough conjoining of both their Bodies. And theſe two Worms are ſo pertinacious or earneſtly bent on this action, that they will rather ſuffer themſelves to be ſlain than be ſeparated. This venereal Labour being finiſhed, they do each of them betake themſelves into their Caverns or Holes. Such Hens as feed on them do plentifully lay Eggs daily, and ſometimes two on a day, the which thing no ſort of Corn will make them do. That Earth-worm is endued therefore with a venereal Nature and Property. There are beſides theſe, other ſmall Vermine that are far more prone (and approach nigher) to a venereal Nature, and they are a ſort that have ſix Feet and run moſt nimbly, and have wings but do not make uſe of them. They are ſmall and broad, and are in great companies in old VValls, and old rotten Boards of Stables, and lay their Eggs in the Walls and VVood. They come abroad onely in curious VVeather, and in a rainy and cold Seaſon do betake themſelves to their Holes, and in fair weather out come they again, and obſerve no order in their coupling. The Female going, carries the Male along with her ſitting on her back, another Male being ſtronger throws him off, and himſelf gets up upon the Female, and he again being thrown off in his room comes a new trader, and thus ſpend they the day in this riding kind of Sport, and the Female is exerciſed with an unceſſant Change of Males. They are not ſeen to eat any Food. Some of them I ſhut up in a Glaſs ſo that they could not get away, yet (in this captivity) they betook themſelves to this venereal Act, and at length ſetting upon each other, would rather periſh with Famine than be ſeparated. They are ſo ſmall that an hundred of them will but weigh an Ounce: Their wings are red and ſpotted with black. They run exceeding

ceeding ſwiftly, I never could find any thing written of them. I gave them to Cats and Dogs to eat with their meat, and I found wonderfull things. Hens and other Birds will not eat them, haply becauſe they cannot brook the too vehement operation of them. They muſt needs be endued with ſingular gifts, he that will make trial, may ſo do, but yet ſo as not to uſe them but corrected, becauſe (amongſt all the Vermine that I know of they do moſt excell, and abound with the greateſt venereal Venome. There are yet beſides theſe, other Worms (or Vermine) that are profitable to make Medicine of. The food and nutriment of the *Aſelli* or Pig-lice is rotten Wood; if you touch them they rowl up themſelves into a round Ball. They are for the moſt part uſed for repreſſing of the Stone. The Cimexes, or Knats, or Flies, are of a red colour, and do vex and diſquiet a Man at night, they ſuck his bloud, and uſually quarter in old Pine-wood, and in ancient Chambers, and are deteſtable things becauſe of the ſtinch they emit. And beſides them, there is another kind of ſuch Vermine that are of a green colour, and more venemous, aud yield a more filthy ſtinch than the red Worms do. This Inſect has wings, and is four times bigger than the Cimex, and live in the Graſs; but when the cold Winter approacheth, they then live in hollow Trees, or hide in the Chinks that be in Walls. If an Ox or Cow do by chance in eating Graſs ſwallow down ſuch a kind of Vermine, they ſwell up, and ſometimes die of it; but yet they do ſo well know how to ſhun them, that the Beaſts ſeldom ſwallow them. I do from hence gueſs, that there lies hidden in this kind of Animal, ſome ſingular matter, becauſe of its wonderfull diſpoſition it hath: For I have tried by certain experiments that it can either retain, or emit its ſtinch as it pleaſeth. It is a notable ſubtile and fallacious Creature, and this I could confirm by wonderfull ſtories. It doth exactly imitate the perverſe diſpoſition of all Turn-Coats, Luſtfull, Venereal, and Beſtial Men. It doth preſently depoſite or loſe its ſtinch in the univerſal *Menſtruum*, but what it will (being thus prepared) perform, I having as yet omitted farther inquiſition, cannot tell. Infinite is the number of theſe and ſuch like Inſects, and without doubt they were not created in vain, they proſecute each other with a mutual and deadly hatred, and do by laying ſnares endeavour to deſtroy each the other. I have known one little ſmall Worm or Inſect, that by ſucking out the juice and ſtrength of the great Earth-Worms do wax fat, and is in all places his Superiour or Maſter. In the Spring-time he is a ſmall lean Worm, and is not ſo big as the Blatta, that live upon Meal, but in Summer time he doth ſo fatten himſelf with the Earth-worms, and becomes ſo unwieldy that he can hardly creep: He is black as a Coal, and moves himſelf by the many ſhort feet he has, is about the thickneſs of a Quill, and about a fingers length, and under the earth ſhrewdly bites the poor Earth-worm, and ſucks from him his beſt juice, which ſaid Earth-worm being no ways able to defend himſelf, doth out of meer pain creep out of the Earth, and brings out his faſt adhering Enemy: he ſticks on to him ſo cloſe, that he can't be driven off, and ſo long ſucks, untill being well ſatiated and full, he at length falls off of his own accord. I have often ſeen theſe Earth-worms ſo long vexed with them and twined themſelves to and fro till this little Vermine hath pierced the Worm through, and divided him in twain, but yet cloſable together again, if he can but onely get into the Earth. You may ſee evident ſigns of the malice of this ſmall Vermine, upon ſome of the older Worms, that have had ſeveral ſuch bitings, and yet cloſed together again. For I know no enemies the great Earth worms have, ſave onely the Mole, and this ſame Worm. This black and martial Worm having done with one, preſently ſets upon another Worm, and ſo ſucks out the beſt juice, and leaves the body of the ſaid great Worm deſtitute of any ſtrength. He is of great virtue and as to his excellency is to be preferred far before all other Worms if but well prepared: As for Spiders, there are many talks of them as if they were poiſonous, but I could never as yet find any ſuch thing in thoſe that grow in the ſpace of one year, and then vaniſh away again; they are ſuch that make their Webs on Trees, Buſhes, and the like to catch Flies in, and are croſſ-bearing Spiders, becauſe they have on their backs the figure of a Croſs. Every month they put off their old skin, and ſo do thoſe too that make their Webs in the corners and holes in Houſes, and will live three months without either meat or drink befor they die. Theſe are ſomewhat worſer than the former, and yet not ſo poiſonous as the report goes, and as is believed. All the green ſort of Spiders, that live in the Graſs and among Leaves are void of all Poiſon, (and all others) ſave thoſe which abide in cold places, as Cellars, and moiſt Vaults, and nouriſh themſelves with Inſects, and are covered over with a black and roughiſh skin like black Silk or Velvet, are ſlow paced, and as being the Kings of all Spiders, do kill the others by their biting, and devour them if they can but get them within their power. If one Spider be thrown into the Neſt of another, the ſtronger drives out the weaker, but they cannot any of them abide theſe black Spiders, abhorring their preſence, and running away as faſt as they can. Nay more, neither the Black-bird, nor other Birds (whoſe food's the other Spiders are wont to be) will eat them. They grow old very ſlowly, and live in a Cellar many a year, as being patient endurers of the cold, and do not renew their skin as the reſt do. Thoſe likewiſe that devour the Flies in ſtores in the Winter, or at leaſt-wiſe are nouriſhed with the ſweet fume or vapour of Hony, Sugar, and ſuch like things, and arrive to an old Age, are alſo venemous. All theſe are rarely uſed in Medicine, there being indeed no need of them amongſt ſuch plenty as there is of good Medicaments. This one benefit I have obſerved in them that they ſo purge ſick Hens, as that they recover their former health, and do preſently after get ſtrength and wax fat. Emmets that live by the juices and Roſins of Trees, are alſo uſed in Medicine, but yet do no great matters. Locuſts, Grylli (a kind of Graſs-hopper) and ſuch like Inſects, (though they are endued with hidden virtues) are notwithſtanding neglected, foraſmuch as there is one onely Mineral that can effect more then all the bigger or leſſer Animals, Worms, and Inſects, and therefore well may they be deſpiſed. There are alſo ſome things that are taken from the bodies of the bigger ſort of Animals that are uſed in Medicine, as the Stomach, Inteſtines, and Teeth of the Woolf; the Lungs of the Fox: The Gall, the Hair, the Skin, the Excrement, the Horns, *&c.* of other Animals; but yet no great matters have been hitherto done by all this ado, becauſe they are parts or Members of ſuch Animals, as being altogether void of Poiſon, are uſually Man's Food, or may ſo be.

Whereas

Whereas were they the parts of Animals that would alter our nature, or were they the Teeth, Bones, Horns, or other parts of venemous Creatures, and then changed and reduced into good Medicaments, ſomewhat might be done by them. By ſuch as alter nature I mean, the Teeth of Dogs, Wolves, Bears, Lions, and ſuch ravenous Creatures; the Bones and Horns of the Elſe, Goats, Kids, Does, Stags, Elephants, and the Hairs of Men and other Animals. Amongſt the venemous Animals, the Teeth and Skins of Vipers, Serpents, Toads, Salamanders, *&c.* In the third degree are the Teeth of the Sea-dog, and Whale, and of the horned Fiſhes, and thoſe which the *Dutch* Marriners call Walruſſen, and others the Unicorn: the Horns of them, and of other ſuch like Sea Monſters, whoſe Fleſh is venemous, and therefore their Teeth muſt neceſſarily be endued with medicinal Vertues, provided they be changed and converted into a convenient Eſſence. Beſides in the Excrements of all Animals, lies hid a ſingular medicinal Vertue, nor is the volatile Salt (but eſpecially of thoſe that are poiſonous) to be contemned. The fixed Salt being the ſubduer of many Diſeaſes, doth not a little help to the making of Medicine. But I am not minded to treat of theſe at preſent, but will onely demonſtrate by what means all Animals are to be diſſolved by the univerſal *Menſtruum*, and Poiſon to be converted into moſt wholſome Medicine. The Vertues of them are already known, nor is ought more required ſave a due preparation, the knowledge of which I am minded to manifeſt in this Treatiſe. It is apparently evident that the Teeth, Horns, Skin, Hairs, and Claws or Hoofs, are by ſo much the better and more efficacious Antidote, by how much the greater and more preſent Poiſon their Fleſh is endued withal, and this we ſee by experience. Such as deſire to know more, of ſuch like venemous Animals, may read my Book, of the ſignature of things, wherein they will find many profitable things and worthy of conſideration.

The preparation and changing of all venemous Animals and Worms, &c. into ſafe and efficacious Medicaments.

AS touching what belongs to their preparation, it doth not conſiſt in the way that hath been hitherto uſed as to the preparing of Animals for medicinal Uſe, the which have hitherto been either reduced into Powder, or elſe have been converted into Spirits, Waters, and Oils, by decoction in a B, or elſe turned (by Calcination) into Aſhes, that ſo their fixt Salt, may be extracted, or (by ſublimation) paſs into a volatile Salt. I do no wiſe contemn theſe, and other hitherto uſed ways and methods of preparing Animals for the uſe of medicine, for in very deed they are good and profitable. But foraſmuch as I have the knowledge of a better and more compendious way of doing all theſe things, I neither would nor could any longer hide the ſame, but communicate it for the good of mankind, and for the help and comfort of the ſick. And now that the well minded Reader, may percieve a difference between the old way of preparing theſe Medicaments and my way, I will briefly declare and demonſtrate the ſame. I have not hitherto heard or read of any other way than this which followeth, *viz.* The Animals are either wholly or elſe ſome part of them, dried in the Air, then powdered and adminiſtred in Powder in ſome appropriate Vehicle, or elſe ſome Honey or Sugar is added to the Powder, thereby to make it into an Electuary; or elſe the Animals are digeſted (whilſt new or freſh) in Oil, then preſſed out, and changed into a Balſam, that ſo they may ſerve either for inward or outward Uſes as neceſſity requires. Or elſe they are made up into other Medicines, and ſo confected and kept for uſe. Or, being new, are diſtilled by a B. in water, the reſidue is by Calcination burnt into Aſhes, and the fixed Salt, is (by the benefit of diſtilled water) extracted out of the Aſhes. Some do diſtil the bodies of Animals, dry, or moiſt, in a Retort, and do get a ſtinking Spirit, Oil, and volatile Salt, which parts they Sever from each other, rectifie them, and keep them to uſe in time of need. Others do put the venemous Animals alive into Oil, or into ſome other Oil drawn out of an Aromatical Vegetable by diſtillation, and ſo ſuffocate them herein; and do afterwards uſe that Oil for outward and inward Uſes, as is evident in the Oil of Scorpions. Theſe are the ways hitherto made uſe of for the preparation of medicaments out of Animals, nor have they been fruitleſly uſed. But whereas I ſaw, that the Animals being prepared the aforementioned ways are venemous and crude, but eſpecially when they are but onely dried and powdered, and ſo uſed, and that the adminiſtring them to the ſick is not without danger, becauſe they ſet upon nature with too much vehemency, if any (nay the ſmalleſt) errour be committed in the Doſe: and beſides, they do (by their ungratefull and loathſome ſavour) beget a nauſeate, and withal conſidering, that the Spirits, Oils, and Waters drawn out of Animals by diſtillation, do for the moſt part ſmell of an *Empyreum*, and are extremely diſtatefull to nature; and that though the volatile Salt, and the fixt, which contain the greateſt Vertues of the Animals, and may more commodiouſly be taken into the body than the Oil, which is plainly intolerable to ſick Perſons becauſe of its ſtinch; yet foraſmuch as in ſuch an Operation the chieſeſt Virtue is burnt up, and corrupted, and that therefore the Medicament ſo diſtilled is leſs profitable than the crude Body of the Animal; this way and method cannot at all be accompted of as worthy the being ranked amongſt the beſt ſort of Medicines. Seeing then and well percieving all theſe Circumſtances, I counted it wholly neceſſary to bethink my ſelf of a more profitable and better way, and ſuch a way too, as by the help whereof, every Animal, or at leaſt ſuch a part of it according as is requiſite, may (without any ſeparating of the whole body into divers parts) be diſſolved, and changed in its whole ſubſtance by a certain diſſolving and correcting Water poured upon it, and ſo its venome be converted into Medicine. Now the diſſolving Water, and the diſſolved Medicine ſtand in ſuch a poſture, as that it may be again abſtracted and ſeparated from the diſſolved and corrected body after its diſſolution and correction, and this ſo corrected or purged body may be adminiſtred in ſome convenient Vehicle to the ſick, or elſe alone by its ſelf, as ſhall be more clearly manifeſted in the following diſcourſe.

A univerſal Menſtruum *by the help of which all Vegetables, Animals, and Minerals are diſſolved, corrected, and reduced into a moſt pure and moſt ſafe Medicament.*

I have in my *Miraculum Mundi*, taught and told you that Niter is the true univerſal diſſolvent, and is operated withall three manner of ways.

1. As it is in its own proper nature and form.

2. When it is changed into a fixt and fiery Liquor.

3. When (by the benefit of the fire) it is diſtilled into an Acid Spirit. With theſe three inſtruments are diſſolved all whatſoever is in the nature of things, are amended, and tranſmuted into a better and purer ſubſtance. But the manner how this is done ſhall clearly be taught in this Treatiſe, and explained, inſomuch that all ſuch as have either out of groſs Ignorance, or conceited Pride, or meer diabolical hatred and envy, hitherto contemned, deſpiſed, and traduced it as a thing impoſſible to be done (as *Farnerus* for one) may be confounded with ſhame, and be driven to confeſs, that their meer ignorance, pride, and envy, cauſed them to oppoſe the Noon-day light, and attempt the extinguiſhing, blotting out, and obſcuring the ſame. And although that I have deſcribed the preparation and uſe of the univerſal *Menſtruum*, both in my *Miraculum Mundi*, and in its explication, as likewiſe in my Apology againſt *Farnerus*; yet notwithſtanding many perſwade themſelves, that that deſcription is too much clad over with darkneſs, and that without a more accurate and plainer declaration or explication, it cannot be underſtood, and conſequently not made uſe of. Therefore that ſuch Men may have their food ready chewed, and thruſt into their mouths, and may have no farther cauſe of labour and conſideration, I will give a plainer declaration and make (in God's name, for whoſe honour, and for the benefit of all mankind, I have thus purpoſed to do) an initiation, and perfectly demonſtrate, that Niter is (by the three aforementioned ways) able to diſſolve, and alter all whatſoever is in the nature of things, and to reduce them into a better ſubſtance. Theſe are the weapons wherewith I enter the liſt with all deriders and haters of the truth, and do demand, if they have any better and more powerfull thing, than this univerſal diſſolvent out of Niter, if ſo, to produce it; if not, then to let this alone. Every man has his liberty, (if he hath better) to publiſh it for the common good; but if he can't produce a better, he may well ſubmit himſelf to the truth. Verily would any man diſcover a better univerſal diſſolvent, he would do me an acceptable thing, and I would moſt readily acknowledge any errors I have committed in this matter, and would refuſe my own proper writings. But that ſome ſuch will ariſe and do this thing, I do not in the leaſt fear. If ſuch an one ſhould come, we will hear and ſee him, and recieve him with a decent reply. In the mean while we will addreſs our ſelves, to the preparation of good Medicines, to the honour of God, and benefit of our Neighbour. The bettering and correcting metals, which is to be accompliſhed by the ſaid Niter, is exactly deſcribed and demonſtrated in the ſecond, third, and fourth part of the Treatiſe of the proſperity of my Countrey; in this place we have purpoſed to treat onely of medicines. But as for the way of reducing Niter into a fixt and fiery Liquor, and alſo into a Volatile, Acid and fiery Spirit; we have already taught in other places of our writings, ſo that it is a meer needleſs thing, here again, to repeat the ſame. But becauſe it is profitable to the lover of Arts, that he find both the preparations here conjoined, I have deemed it neceſſary to ſet them down both to your view.

The Proceſs of turning Salt-peter into a fiery Liquor.

TAKE of pure Salt-peter, and ſuch as is free from all common Salt one pound, put it into a ſtrong and well burned Pot or Crucible, with a Cover to it, put it into a VVind Furnace, urge it ſo long with Coals till it be a bright red hot, and all the Niter flow; which being molten and in flux, caſt in a little Powder of good Char-coals, that ſo it ſwimming at top of the Salt-peter may burn up. This Coal Powder being conſumed, throw in ſome more of the ſame, and proceed on thus with caſting on Coal Powder ſo long till the Coal Powder you caſt in will not take Fire any more, and the Salt-peter appear of a greeniſh and sky-colour. Then pour it out thus molten into a warmed Mortar or Baſon, (for if you throw it into a cold Veſſel, it will leap up into your Face) and there let it lie till it be cold. If you touch your tongue with ſome of this Salt, you ſhall find it fiery like the Salt of Tartar. Beat this Salt into a Powder and put it into a Glaſs, or elſe ſet it in ſome moiſt or cold Cellar, and in few days, nay, or hours, it will be diſſolved into a clear and fiery liquor, which ſtrain through Cap Paper or a Filter (as they call it) and ſet it up for uſe.

The uſe thereof in the preparation of ſuch Medicaments as are made out of Animals, and alſo Vegetables.

FOraſmuch as the uſe of this *Menſtruum* is already demonſtrated in my firſt Apology againſt *Farnerus*, and in the firſt part of this *Spagyrical Pharmacopœa*, wherein the Eſſences of Herbs are taught. But in this Treatiſe ſhall mention be made onely of ſuch Medicaments as are preparable out of Animals. I will here ſet down the way and manner of operation, whereby not onely Animals, but alſo Vegetables my be corrected and tranſmuted into ſafe Medicaments. And here it is to be noted, that the uſe of this *Menſtruum*, takes place onely in correcting ſuch Herbs and Animals as are ſtrongly operative and as it were venemous, whoſe malice is to be neceſſarily removed. For thoſe Herbs that are good, and uſed in the Kitchin, and without any hurt in them, need not any correction, except one will make out of them, an extract by Spirit of VVine, or make of them a burning Spirit, and Oil, as alſo a fixed Salt, and conjoin them by the benefit of Art, and make them into ſweet Eſſences, which labour is accurately deſcribed in the firſt part of my *Spagyrical Pharmacopœa*. In this place we treat onely of turning Animals, Vegetables, and Minerals into ſweet Medicaments, by the benefit of Salt-peter: And in other places of my Writings is ſufficiently enough taught by what other ways, and thoſe various ones too, ſeveral Medicaments may be prepared, and that without the help of this univerſal diſſolvent, whereto I refer the well minded Reader, and proceed on here to teach the preparation of the ſaid Medicaments by that hitherto often named fiery diſſolvent, which (without any additions) is of notable effect.

The

The Preparation of Animals and Vegetables by the fiery Liquor of Niter, their Diſſolution, Correction, and Tranſmutation into wholſome Medicines.

TAKE any Animal or Herb, what you pleaſe, if it be new, cut it ſmall; if the Animal or Herb be dry, beat it into Powder, and pour thereto the liquor of fixt Niter, that it may well moiſten the Animal or the Herb, and may cover it all over; ſet the Glaſs in a B. and digeſt the venemous Animal or Herb for one day and night, in which time the liquor of Niter will ripen the venemous Animal or Herb, and tranſmute it, and make a Medicine of the Poiſon. After the Cucurbit is cooled in the Balneo, take it out and pour forth the liquor, together with the corrected Animal or Herb into another Glaſs having a long Neck, and pour thereon the beſt Spirit of Wine, or burning Spirit of Corn, and ſuch as is well purged from all Phlegm, that it may ſwim on the ſolution the height of two fingers. Note well, that the liquor of Niter, and likewiſe the burning Spirit, muſt be well freed from all Phlegm, ſo that the Spirit may not conjoin it ſelf with the Niter, but ſwim on the top of it. For if both of them be watery or phlegmy, there would be a conjunction or commixion of them both, and your labour would miſs the event hoped for, and this is well to be obſerved. Therefore ſeeing that ſuch a commixtion, is prevented by removing of the aquoſity, the burning Spirit will attract to it ſelf, the true and corrected Eſſence of the Herb or Animal, and leave the fixt liquor together with the unprofitable Fæces of the Herb or Animal. Separate the burning Spirit thus impregnated with the Eſſence, and ſo much that it can attract no more, by pouring it off from the liquor, and pour more Spirit thereupon, repeating this labour ſo long and ſo often, untill all the Eſſence ſhall be extracted out of the liquor of the Niter. Then take all theſe extractions which contain the tranſmuted or corrected venome of the Herb or Animal, and put them together in a Cucurbit, in a B. M. and draw off the burning Spirit with a gentle heat, that ſo at length the remaining liquor, may be of a thick and dark coloured reddiſhneſs Note well that the beſt part of the burning Spirit may be alſo ſeparated in a B. and reſerved for farther uſe, but its remaining and weaker part may be taken out with the extract, out of the B. M. and be evaporated in a Glaſs Veſſel, over a vaporous B. to the thickneſs of Honey. For in ſo doing, there's no fear of burning the extract in the Cucurbit, if the B. ſhould be over hot; and this you are to have an eſpecial regard unto. But if the evaporation cannot be done in Glaſs Veſſels, by a vaporous B. then when the Eſſence is brought to ſuch a paſs in a little Cucurbit, pour thereto ſome of that burning Spirit, that came firſt over, and preſently ſhake it well about, and mix it well, and this will again forthwith extract the pureſt part of the Eſſence, and leave behind a few Fæces, with a little of the fixt Niter Liquor, from the which, the burning Spirit together with the Eſſence, is to be forthwith ſeparated, by pouring it off, leſt it ſhould (by any longer ſtay on the Fæces) draw alſo to it ſelf the Salt, and ſo not get the ſweet Savour and Odour of the Eſſence. But if any one doth yet deſire to make the Eſſence more pure and more ſweet, he may extract it yet a third time after the aforeſaid manner, and after this third labour there will remain again ſome more Salt, and the Eſſence will become ſweeter. If a diligent regard be not had hereunto, there will (for the moſt part) ſome of the fixed Salt abide with the Eſſence, and render it of an unpleaſant ſavour: this admonition therefore is not to be neglected, but ſuch a one that covets the obtaining of any good muſt beſtow his labour with all kind of diligence.

This is an exact deſcription of the manner of preparing moſt efficacious Medicines, out of the moſt venemous Herbs and Animals. Furthermore this is to be noted, that when the Eſſence is extracted by the burning Spirit, out of the Alkalizated Herb or Animal, the remainder is to be boiled in an earthen or glazed Pot even to drineſs, and afterwards to be made red hot, that all the impurity may be conſumed by calcination, and the pure fixt Niter may remain alone, which if you ſet in a Cellar, and do again let it diſſolve into a liquor, it will be of the ſame virtues as before, and thus will it be many a time, and ſo may the Spirit of the Wine be uſed for the like operation.

Now although this fixed Niter doth change as well venemous Minerals, as Animals and Vegetables, and reduce their venenoſity into wholſome Medicine: yet is it more fit for the ſulphureous Vegetables, Animals, and Minerals, than for mercurial ones; and for ſuch the Acid Spirit of Niter is more fit, though it doth alſo diſſolve, correct, and tranſmute Vegetables, Animals, and Minerals; the which is chiefly obſervable in the Minerals, for therein may be learned the wonderfull property, and the all-things-changing efficacy of this Fire. For Niter crude as it is in its body, being mixed with combuſtible Animals and Vegetables, and enkindled, burns up all things, and drives them with the flame up into the Air, inſomuch that nothing ſave the fixt Salt onely is left remaining: And therefore this crude Niter is altogether unfit for Vegetables and Animals, if you would have any good from them. But in the venemous Minerals it performeth its office better than the fixt Niter, or than the volatile corroſive or Acid Spirit, as ſhall be afterwards ſhown where we treat of Minerals. This I thought expedient to adviſe you of, and have thus done to this end, that thoſe that are deſirous of the Art may learn the divers operations of Niter. The crude Niter doth (by its flame, diſplay its virtues upon the venemous Animals, and changeth them in few hours ſpace into ſafe Medicaments) Being reduced into a fixt liquor, it diſſolveth all ſulphureous Vegetables, Animals, and Minerals, the which thing the common or crude Niter, as alſo the acid and corroſive Spirit will never do: As this fixt liquor of Niter alſo diſſolveth wholly the ſulphureous Minerals, and leaves nothing behind ſave the onely Fæces. So the acid Spirit of Niter diſſolveth all mercurial Minerals, that nothing remains undiſſolved. From whence 'tis evident, that every nature doth lovingly embrace its like, and is willingly conjoyned therewithall, and eſpecially if ſuch natures are pure and clean, and not mixed with any other things. But that you may yet better underſtand theſe things, hearken a little farther. There is no Herb, no Animal, no Mineral, that conſiſteth not of its three firſt principles, *viz.* Salt, Sulphur, and Mercury, but yet are theſe very unequal: for in one ſubject, the Salt is moſt powerfull, in another, the Sulphur, in a third, the Mercury: But when in ſuch ſubjects conſiſting of the three principles, there is not too much inequality, and that no principle bears ſway over another, then either the acid Spirit,

Spirit, or the fixed Salt of the Niter will alike diſſolve them, as is evident in many Vegetables, Minerals, and Animals, which being compounded of well tempered Principles, do admit of Solution and Correction, both by the fixt Liquor, as alſo by the volatile acid Spirit: For example. I take ſome Herb, be it *Napellus*, or *Mandragora*, or *Opium*, or ſome Animal, as a Spider, Scorpion, or Golden *Scarabæus*, I deal on this Subject now with fixt Niter (as I afore taught) and the whole will be diſſolved, changed, and become a ſafe Medicament, (for they conſiſt of well tempered Principles.) If now I pour upon either Subject the acid Spirit of Niter, it will be diſſolved therein, changed,and corrected, and put on the nature of an wholſome Medicine, as well as when diſſolved in the aforeſaid Liquor. Now though both Liquors, *viz.* the fixt Liquor and the acid Spirit do ariſe out of one Root, yet do they exceedingly differ in their nature, and do proſecute as it were each the other with a deadly hatred: And that becauſe the fixt Liquor, as well as the acid Spirit, are in ſome ſort as yet adverſaries, and do not abſolutely bear ſuch ſway as if they were in one Nature For they are from one ſubject, and are by the fire drawn out of common Salt-peter, and reduced into two contrary parts and into Enemies oppoſing each other. But they are again conjoined, that they may mutually ſet upon each other, with that enmity they have received from the fire, and may overcome and kill each other, then neither the fiery Liquor, nor the acid Spirit is any more diſcerned, but they return unto that which they were before, and from which they were born, *viz.* unto Niter or common Salt-peter. Excellently well therefore ſay the Philoſophers, make the fixt Volatile, and the Volatile fixt. *Hermes* alſo ſaith, that our Dragon dieth not without his Brother and Siſter, many things might be ſpoken of this matter, but they belong not to this place, but to the fourth part of the Proſperity of *Germany*, in which is treated of the Concentration of Gold and Silver into Tinctures, but if ſo be that one of the aforenamed Principles,whether it be Sulphur or Mercury (for the Salt is not to be here conſidered) do bear overmuch ſway in any ſubject, then both the diſſolvents cannot alike diſſolve that body, but that diſſolvent onely which is appropriated to the nature of that Subject: As for example. The ſeed of any Herb (though it hath a mercurial Salt) yet the Sulphur hath the predominancy, and therefore admits of diſſolution by the fixt Liquor rather than by the acid Spirit. But if the Oil be ſeparated from the mercurial Salt, either by expreſſing it or diſtilling it out of the Seed, then the fixt Liquor hath a greater efficacy of operation upon its like, and diſſolves all the Oil, without leaving any part thereof behind. But contrariwiſe, the Oil being ſevered from its mercurial Salt, which admitteth of the acid Spirit onely, the acid Spirit hath no power at all to diſſolve it, though he be ariſen from the very ſame Subject, as his brother the fixt Liquor is. So then the Siſter anſwers not the brother in the like operation, and 'tis impoſſible for the Siſter to accompliſh thoſe things that the Brother doth. But when both brother and ſiſter are mixed together, they do again beget Children like to their Parents, *viz.* *Hermaphrodites*, from whence themſelves had their Original, returning to ſimple and crude Niter, out of which there do again proceed the like Procreations and Generations of the maſculine and feminine Sex. And ſo one birth tranſmutes it ſelf into another, augmenteth and bettereth each other and that even to infinity, if it do but get its own conjugal bed, and be dealt withal in a Philoſophical manner. And what we have ſaid of the vegetable Sulphur, the ſame may likewiſe be underſtood of the Animal and Mineral. For ſuch a Sulphur as is ſevered from its Salt and Mercury, the acid Spirit of Niter will not diſſolve, but its ſulphureous Liquor doth readily perform it, and this doth wholly diſſolve the common mineral Sulphur, whereas the acid Spirit leaves it untouched. But ſuch a Subject as participates of both Natures, *viz.* of the ſulphureous and mercurial one, doth admit of diſſolution both by the fixt Liquor, and by the acid Spirit, whether it be a Vegetable, Animal, or Mineral. Therefore the extreams, *viz.* the beginning and the end, the firſt Ens and laſt Eſſentiality, the volatile and combuſtible, and the fixt and incombuſtible, are to be compared with each other, (as thus.) Let the common combuſtible Sulphur and which adheres to Minerals and Veins of Metals be accompted of as the beginning, and let Gold be accompted the end. The fixt Liquor now diſſolves the Sulphur wholly, but cannot do ſo with the ripe Gold; but the acid Spirit diſſolves that, and cannot at all diſſolve the Sulphur. But now ſuch as are middle Subjects and do partake of both natures, *viz.* of a ſulphureous and a mercurial, ſuch as are *Saturn*, *Jupiter*, *Mars*, *Venus*, *Mercury*, *Lune*; for they are diſſolveable by both, *viz.* by the fixt Liquor, and alſo by the acid Spirit. But by how much the more either of them partake of combuſtible Sulphur, by ſo much the eaſier doth it admit Solution by the fixt Liquor. So this Liquor doth eaſily diſſolve theſe Minerals, *viz.* Antimony, Auripigment, common Sulphur, red Arſenick, *&c.* and of metals theſe, *Mars*, *Venus*, *Jupiter*, *Saturn*, difficultly; *Lune* more difficultly; *Mercury* moſt difficultly; but for *Sol*, which is the laſt and beſt of all, it doth in no wiſe diſſolve, becauſe it is plainly freed by nature from its ſuperfluous, extraneous, and burning Sulphur, and is waſhed, purified, and maturated into a moſt pure mercurial Subſtance. Contrariwiſe the acid Spirit (if it be ſtrong enough) doth diſſolve all, even from the ſupreameſt metal, to the loweſt Mineral, Sulphur onely excepted, which it can't diſſolve. Yet doth it more eaſily diſſolve one Subject than another according as it is of more affinity with, or remote, from its own Nature. And therefore every Chymiſt may eaſily know the Nature and Properties of every metal and mineral by the diſſolving them, with theſe two, *viz.* Liquor and acid Spirit. Note well, I have (by this means) found out what Metals and Minerals are of neareſt Affinity with Gold, and this kind of enquiry is far more certain and ſafer than the reading of many Books; nor will it be hurtfull to him if he did underſtand the ſignature of metals and minerals, and thereby know how to learn their Nature and Property; but my intent is not to treat of that, in this place, but will refer my labour to the ſecond part of my Treatiſe of the Proſperity of *Germany*, where we will ſpeak of the Concentration of Metals and Minerals. But that I may trifle out no more time in the diſcourſing of the difference of metals and minerals, I will go on and deſcribe how the venemous Subjects of Animals and Vegetables are to be diſſolved by the acid Spirit of Niter, to be tranſmuted and ripened thereby, and converted into ſafe Medicaments.

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The Proceſs and Preparation is as follows.

TAKE either *Nux Vomica*, or venomous party-coloured Toads, Scorpions, Cantharides, or ſuch like venomous Vegetables or Animals. Cut your Vegetables, but take your Animals whole as they are, that ſo dying (in the *Menſtruum*) they become greater and ſafer Medicaments, put them in ſome glaſs: As for example. Take one Ounce or two Ounces of the Spirit of Niter; put it in a glaſs with a narrow neck, that ſo it may be ſtopped, and put into that Spirit ſuch Vegetables as you would diſſolve; which being diſſolved into a Liquor, then put yet more Herbs, thus doing ſo long till the Spirit grows thickiſh, and can diſſolve no more. After the ſame manner may you proceed with the Animals if dead; but if alive, then to the Spirit add ſome water before you put the Vermine thereinto; for the too too vehement force of the Spirit, is to be ſo allayed, that the Vermine being put in alive may not preſently die, but may kill himſelf with his own proper Poiſon. For if the Spirit be too ſtrong, ſuch kind of Animals will die in leſs than a moment, and not know what hath happened unto them. But now they live longer in the milder Spirit, and when they ſee that they muſt needs die, they are extreamly enraged, do prick, and bite, and kill themſelves with their own Poiſon, inſomuch that the venome is increaſed, and the Medicine acquires the greater Virtues. So then thoſe which thou haſt put in being diſſolved, add more untill the Spirit becoming thick, can diſſolve no more; ſtrain this Solution through a thin Linnen Cloath into another glaſs, and pour thereon by little and little, or drop by drop, the fixt Liquor of Niter, that it may kill the acid Spirit, and they both having loſt their ſtrengths return into Salt-peter as they were before, and the corrected Vegetable or Animal may be precipitated to the bottom in the form of a Powder. When you have ſo done pour on ſome more freſh Water, or Rain-water, that the Salt-peter may be the better diſſolved. Then pour out all the Solution, through a thin Linnen Cloth placed in a glaſs Funnel, into another glaſs, that ſo the Salt-peter, which before was partly an acid Spirit, and partly a fixt Liquor, and is again become Niter, may (being diſſolved with the water poured thereon) run through the Cloth, and that corrected Vegetable or Animal may ſtay behind in the ſame, the which by pouring on ſtore of fair water, is to be freed of all Saltiſhneſs, and afterwards to be put together with the Cloth upon Cap-paper ſeveral times doubled. This Paper will drink up all the moiſture, and the remaining Animal or Vegetable Powder will ſtay behind: which being thus dried is to be lay'd up for uſe, and may afterwards be uſed either *per ſe* in the form of a Powder or be reduced into Pills, which before this preparation could not be ſafely uſed, nor without much danger. There is beſides, another way of turning Animals and Vegetables by the acid Spirit of Niter, or by the fixt Liquor into wholſome Medicaments: and the manner thereof is thus.

Thoſe Subjects which refuſe to be diſſolved by the fixt Liquor, are diſſolved by the acid Spirit, and precipitated with the fixt Liquor, or contrariwiſe thoſe which are not diſſolveable by the acid Spirit, are diſſolved by the fixt Liquor, and precipitated by the acid Spirit. All being precipitated, and the Diſſolvent ſufficiently ſlain, let ſome more of the fixt Liquor be poured thereupon, ſo that it may much exceed in quantity the acid Spirit. This done, let the Phlegm be drawn off in a vaporous B, and to the remaininging Liquor, let be poured as much burning Spirit as is ſufficient, that ſo it may by extraction extract all that is to be extracted. This burning Spirit operates upon, and attracteth to it ſelf, no other thing ſave the onely Eſſence of the Herb or Animal alone, and leaves the Diſſolvents untoucht. But this Eſſence is no ways inferiour neither in virtue or efficacy, to that which was prepared after the before deſcribed manner. And thus much let ſuffice to have been ſaid of the preparation of Vegetable and Animal Medicaments. And now we will betake our ſelves (in God's Name) to ſpeak likewiſe of Mineral and Metalline Medicaments, and ſee what good thing the Omnipotent God beſtoweth on us by the benefit of theſe things.

The preparation of Metalline Medicaments is almoſt a-kin, and like to the precedent preparation of Vegetable and Animal ones, and doth herein onely differ, that the moſt part of Minerals and Metals, are diſſolved, corrected, and converted into ſafe Medicaments by crude and purified Niter, as the following manner demonſtrates.

Take of powdered Antimony and purged Niter each alike, mix theſe equal parts in a covered Pot leaſt the Maſs leap out, calcine it, after Calcination pour it forth, and reduce the Maſs into a Powder, and waſh off the Salt-peter with Water and dry the Antimony, which hath now loſt its black Colour, and is become white. Mix it again with an equal part of Salt-peter, calcine it, and waſh it, and repeat this Labour a third time. This done, the Antimony hath laid aſide all its venomoſity and blackneſs, and become white, and ſuch a medicament, as may be moſt ſafely adminiſtred in expelling all Diſeaſes by Sweat, the Doſe from two, three, four, even to ſix Grains. Note well, if you uſe the *Regulus* inſtead of the Crude Antimony, it will preſently, in the firſt operation become a white Diaphoretick, and to be adhibited in the ſame Doſe. Even after the ſame manner may you deprive poiſonous Arſenick, Auripigment, and ſuch like Poiſons of all their venomouſneſs, and tranſmute them into moſt ſafe Diaphoretick Powders. But foraſmuch as the preparations of them do not correſpond with every ones mind, yea and may eaſily injure the ignorant and unskilfull, my advice to ſuch men is this, that they abſtain from medling with them and betake themſelves to Antimony onely, and to fix him well, for that they may uſe him with far more ſafety. But that I ſpeak here of thoſe moſt highly venomous Objects, I did it for this end, that every one might know, that even the chiefeſt Poiſons may be corrected and tranſmuted into Medicines, merely by the help of Niter alone. But he that deſires yet farther to render Antimony ſafer and better, let him uſe the following preparation: Take the aforeſaid Diaphoretick Antimony, fixed by the help of Niter, diſſolve it up in ſtrong *Aqua Fortis*: and being diſſolved, precipitate it with the fixt Liquor of Niter, that it may ſettle to the bottom like a ſnowy Powder: Pour off the moiſture, vapour away ſome part of the humidity, and ſet by the remainder that the Salt may ſhoot, and ſo will you have your Niter again. As for the Powder, dry it and waſh it well with water, and it may well be ſtyled a *Bezoardicum* Mineral, being a moſt excellent Medicine to expel all Diſeaſes by Sweat, the Doſe of which is one, two, three, four,

ſix, even to twelve Grains, according as the Diſeaſe and Patient is. But I have ſufficiently enough treated of this Medicine at large in my other Writings, and therefore needs not to be repeated in this place. So then all, Metals, Minerals, Stones, and whatſoever is in the World, may by theſe three ways be diſſolved and corrected by Niter, either crude, fixed, or acid, and be tranſmuted into Medicines void of all kind of danger. Thou maiſt diſſolve all the Metals (Gold onely excepted) with the acid Spirit of Niter, and if thou put thereto a little *Sal Armoniack*, or rectifie it with common Salt, then it will likewiſe diſſolve common Gold. But the Minerals are diſſolved with the fixt Liquor of Niter, and precipitated, and then waſhed with common water, and being waſhed are uſed to make Medicine with. They yield ſubtile Powders, according to the nature and property of their Metals and Minerals. The Powder of Gold is yellow, and is called *Aurum Fulminans*, of Silver, Aſhy, of Copper, Green, of Iron, Red, of Tin, and Lead, White, of Antimony, white; of *Lapis Calaminaris*, *Tutia*, and *Cadmia*, Aſhy: But the common Sulphur, and all the precious and common Stones, it (*viz.* the acid Spirit) cannot diſſolve, but leaves them for her Brother, the fixed Liquor to diſſolve. So then what the Siſter cannot do, that the Brother can perform with eaſe, and that which the Brother can't effect, that the Siſter undertakes the accompliſhment of; and what neither of them can poſſibly perform, we ſee it poſſible to be done, by their Father and Mother, *viz.* the crude Niter, inſomuch that to this ſubject is a power given of doing what you pleaſe. But that I may perfectly demonſtrate, that Niter is able to diſſolve all the things that are in the World, and may withall ſhew, how thoſe ſubjects, which yields not to a Solution by the acid Spirit may come under the power of the fixt Niter, I will proceed on, and begin with the common Sulphur.

Take Sulphur reduced into Powder, one part, of fixt Niter two parts, put them in a Cucurbit, pour thereon twice as much water as they both of them weigh, *viz.* ſix parts. Boil them about one hour in Sand, in which boiling the Liquor of the fixt Niter, will diſſolve the Sulphur into a red Solution. Strain it through Cap Paper, and precipitate it by the acid Spirit, then waſh it, and you ſhall have a white and ſubtile Powder, profitable in the Diſeaſes of the Lungs. And now it remains that I ſhew you Flints, Sand, Cryſtal, all kinds of Stones both precious ones and common, (which the acid Spirit is not capable of diſſolving) may be diſſolved by the fixt Niter, and diſplay their Virtues, the which is thus done. Make the Flint, Cryſtal, Marble, or any other Stone that is meltable in the Fire into a Glaſs, very red hot, and preſently ſquench it in cold Water, and dry it, that it may be powdered with eaſe. Take one part of this Powder, and three or four parts of fixt Niter, mix them well, put them into a Crucible, and cover the Pot, and melt them with a ſtrong Fire in a Wind Furnace, that it may become a tranſparent Glaſs. Then turn it out, Powder it, and ſet it in a Glaſs Veſſel in a moiſt Cellar, that the Stone may be turned into a Liquor; or elſe having powdered the ſaid molten Glaſs, pour common Water thereupon, which will diſſolve the Powder. If now you pour the ſaid acid Spirit of Niter on the clear Solution, then the fixt Niter being deprived of its fiery virtue and force, will let fall the diſſolved Stone in the form of a Powder, which is to be waſhed with ſtore of Water, and be dried, and it will be the Magiſtery of that Stone, which this operation is beſtowed on. Theſe Stones may likewiſe be digeſted and diſſolved in a ſtrong Glaſs ſet on Sand, with the fixt Niter Liquor, but this moiſt way is more ſlow and tedious than the former dry way which is done by melting. And beſides, the Glaſſes themſelves cannot long endure this liquor, but are therewith alſo diſſolved. Now theſe Magiſteries or Stones thus prepared are profitable in the Stone, the which they do not onely expel out of the Reins, but likewiſe out of the Bladder, if it be not too much hardned. If you deſire to make this Medicine yet better, then do thus. Take the Liquor of the Flints or Cryſtals, that are diſſolved in a Cellar after their having been melted, put it in a Vial having a long Neck, whereon pour twice as much Spirit of Wine, but ſee that the Belly of your Glaſs be but half full; then let ſome body or other ſhake the Glaſs in their hands ſtrongly up and down, and commix the Liquor and Spirit of Wine well, then will the Spirit penetrate, diſſolve and render it ſweet. Note well, this agitation is neceſſary, becauſe if it be not thus toſſed to and fro, the Spirit of Wine will ſtand at the top of the Liquor, and not attract the fixt Niter to it ſelf. Now when the Spirit of Wine that you poured firſt on, is ſharp enough, pour that out and pour on more, and when that is ſharp enough, decant that alſo, and pour on more, repeat this operation ſo often, untill the Liquor of the Stones be rendred ſweet. Note well, the Spirit of Wine muſt be void of all Phlegm, for if there be in it any water, the Liquor of the Stones would be precipitated into a Powder. But he that proceeds well and rightly will obtain a noble Medicine againſt the Stone of the Microcoſm.

N. B. After that the Liquor of the Stones is brought to a ſweetneſs, it is to be covered over with the Spirit of Wine, in the Glaſs you keep it in, that ſo the Liquor may abide in its Liquidity, otherwiſe it will in a few days ſpace be turned into a Stone in the Glaſs. When you would uſe the Liquor, ſtop the mouth of the Glaſs with your Thumb, and turn down the Glaſs that the Spirit of Wine may (as being lighter) give place for the Liquor to flow out by your Thumb, and thus may you take out as much Liquor as you pleaſe. I have been the more curious in deſcribing this preparation in this place, that ſo no error may be committed, ſeeing this labour requires an expert Man, and not ſuch a rude and inſipid Sot as *Farnerus* is. Experience teſtifies that the Liquor, and the Magiſtery of Sand, Flints, Cryſtals, and ſuch like Stones, are endued with one and the ſame virtues. Any one may chuſe which in his opinion is beſt. I commend the common white Flints, that are in the Sands of Rivers. The Magiſtery of theſe are notably conducive to weak Stomachs, nor is any thing corrupted by the ſame, whatſoever Diſeaſes they be uſed unto. The Doſe of the Powder is 4, 8, 12, 20, 30 Grains, of the Liquor, 1, 2, 3, 4, even to 10 Grains. This Liquor, whereſoever it comes, adheres to every matter it meets with, if it be kept in a dry place, it becomes a natural and tranſparent Stone. In Man's Body, it attracts to it ſelf its like, and carries it off with it ſelf. There lie hid in it many other ſecrets, which foraſmuch as they pertain not to this place, are to be found in my other Writings. Moreover there are Stones found which do not admit of Solution either by the fixt Liquor or acid Spirit, and they are to be thus tamed. Take

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that Stone which yields not to a Solution by the fixt Niter Liquor, nor by the acid Spirit, beat it into Powder, then mix it with three times as much of the Powder of pure and well dried Niter. Then with this mixture fill a Crucible half full, take up a Coal with your Tongs, and put it into the matter, and hold it hard on, leaſt the flame throw it clear out again. So the Niter being kindled by the Coal doth (together with the Stone) flame and burn up, and cauſe ſuch a ſpeedy and vehement Fire, that the Stone is thereby penetrated and opened, and may (after this operation) be diſſolved with common Water. This done, the Solution which hath imbibed (or which contains) the diſſolved Stone, is to be purified by paſſing it through Cap Paper, and to be precipitated by pouring in of the acid Spirit, that ſo the Stone may ſettle down in the form of a Powder, the which is to be waſhed with Water, to be dried and kept for uſe. Thus now have we diſſolved all the Metals, all Stones, all Vegetables, and Animals, and tranſmuted them into Medicaments. And were there yet any other thing in nature beſides theſe ſubjects, or could there be found any thing elſe, I would have taught its Solution by this my univerſal *Menſtruum*. But foraſmuch as I find nothing elſe beſides Vegetables, Animals, and Minerals, as likewiſe all kinds of Stones, yea and Glaſs it ſelf, nor can find ought beſides, it will deſervedly remain an univerſal *Menſtruum*, and Diſſolvent (though the moamiſh deriders, and brethren of ignorance, and haters of the truth, ſplit for anger) conſtant, unconquered, and incomparable, as long as the World ſtands. As to its efficacy in bettering and correcting Metals, the ſecond, third, and fourth Parts of my Treatiſe of the Proſperity of *Germany* will teſtifie, for therein we treat of the concentration of Metals. But as for ſuch other myſteries as concern true Hermetick Philoſophy, and that lie hid in this wonderfull ſubject, they are accurately and ſuccinctly deſcribed in my Treatiſe of the Nature of Gold, and of the concentration of the Elements, in which Book the ſtudious Reader may delight himſelf with divine and humane Miracles. So now we have proved and demonſtrated, that Niter is an univerſal *Menſtruum* and Diſſolvent, ſeeing there is nothing in the nature of things that is able to reſiſt its diſſolving virtues; nor can its like be found out. Well therefore may it moſt deſervedly remain, as in very deed it is, and as 'tis accounted of both by my ſelf and all skillfull Chymiſts. But now if any one ſhall object and ſay, that the before produced proofs are no ways ſatisfactory to him, neither do demonſtrate that this diſſolvent is alſo profitable as to the Philoſophick Work, I do not intend to anſwer him, nor will I ſo open my Boſom to ſuch Adventerers as *Arnoldus* did to *Lully*, but leave ſecret things in a ſecret place. I have ſpoken enough, and do alſo ſpeak much in my Treatiſe of the concentration of Heaven and Earth. He that underſtands not my ſayings, and doth as yet deſpiſe them, has no reaſon to reckon himſelf amongſt the Adeptiſts and Sons of *Hermes*, but rather is of the rank of the *Farnerians* ſodality, and muſt remain at the Hogs Trough.

The Uſe, Power, and Virtues, of the Medicaments out of Vegetables, Animals, and Minerals: The Compoſition whereof we taught above.

AS concerning Vegetables, ſome few of them there are that need correcting by the univerſal diſſolvent. For ſuch things as are in their own nature whole and ſound, need not any Medicament. For Roſemary, Fether-few, ſweet Marjoram, Sage, Thyme, and ſuch like Herbs needs no correction, but may be reduced into their ſweet Eſſences, according to the ways that I have preſcribed in the firſt part; but thoſe Herbs that are more ſtrongly operative, and uſed in medicinal affairs, are not without danger, ſuch as are *Henbane*, *Hemlock*, *Mandrake*, *Opium*, *Tobacco*, *Napellus*, *Levant-Berries*, *Nux Vomica*, &c. theſe muſt be amended by a good correction, or elſe can they not be ſafely taken into the body. If they be diſſolved by the fiery operative *Menſtruum* and corrected thereby, (as we ſhewed in the foregoing diſcourſe) then may they be taken into the Body moſt ſafely, and without any danger, and will perform things wonderfull in Medicine. And whatſoever was a Poiſon before is afterwards rendred a Poiſon-ſubduing Antidote. For Example, *Henbane*, *Mandrake*, *Opium*, have by their nature a ſtupefactive power, and do ſuppreſs the vital Spirit, do infect, or deſtroy, the *Humidum Radicale*, do procure overmuch Sleep, yea, do cloſe up the Life in perpetual Sleep. But now thoſe Herbs being corrected by the force of the fiery Water, and being diſſolved of their Poiſon, do no more hurt, but allay all inward and outward pains, do paciſie the vital Spirits being provoked and enraged, do compoſe all diſquietudes with a ſweet pleaſant reſt, do expell venemous humours out of the Body by Sweat, and do by reducing all things into a quiet State, heal many Diſeaſes. The *Cicuta* or *Hemlock*, *Napellus*, *Levant-berries*, *Nux Vomica*, &c. do not onely cauſe a moſt deadly Sleep, but do alſo provoke moſt vehement vomitings, and make moſt accute prickings in the body, and deprive Men of their Scences and underſtandings, and do at laſt bring on Death, if they be admitted into the Body in too great a quantity, and are not drawn out from thence again by ſtrong vomitings. But ſuch Herbs being corrected, and changing the Poiſon into wholſome Medicaments, do no more cauſe ſuch horrible and dreadfully painfull Symptoms, but by penetrating the whole Body in a harmleſs and inſenſible manner, do take away all obſtructions, and caſt forth all hurtfull things out of the Body, by ſweat, urine, and ſtool, and frees the inward bowels by purging them from all impure humours, and do happily take away occult Diſeaſes. And now if they did before load the head with a very great heavineſs and render it mad and unſound, it doth now mundifie it, and purge it, and free it from grievous and obnoxious Vapours, and do comfort the Brain and make Ingenuity or Memory better. So that what they did corrupt (before their correction) they do now (after their being bettered) amend and refreſh it. But however you are to have good regard, that you be carefully provident in the uſe of theſe Medicaments, that you exceed not a due meaſure, and ſo commit an errour, for it is not lawfull to play with ſuch kind of penetrative Medicaments.

The ſtrongeſt purgative Medicaments, as *Eſula*, *Cataputia*, *Staveſacre*, *Gummi Gutta*, and ſuch like, being diſſolved in this *Menſtruum*, and precipitated, do loſe their vehement, and as it were venemous quality, and become ſafe and gentle purges. *N. B.* You are here to obſerve (as concerning this Solution) that foraſmuch as the Seed of *Eſula*, *Cataputia*, *Staveſacre*, as likewiſe *Guttæ Gambogia*, and *Scammony*, are of a fat and reſinous nature, are not to be diſſolved with the acid Spirit of Niter, but with its fixt

fixt Liquor, or better with the Spirit of Wine corroborated and alkalizated by fixt Niter, and to be precipitated with the acid Spirit. And ſo with the ſame Spirit of Wine, being made more ſtrong by the addition of the fixt Niter, all Gums that have a fat quality (may be thus dealt with) and contrariwiſe ſuch as are not fat may be diſſolved with the acid Spirit, and precipitated with its contrary Liquor. So likewiſe all bitter Juices, as Aloes, Myrrh, and the like, being therewith diſſolved and corrected do acquire a more ſweeter and more gratefull Savour. It is alſo very fitting, for the grievouſly ſmelling Gums, as *Aſſa Fœtida* is, and for correcting other ſuch like ſtinking things ariſing from Animals or Vegetables, and ſo ſpoil them of their grievous Odour, and for correcting them into a gratefull ſmell. Inſomuch that ſome things that emit even almoſt an ungratefull ſtinch may be ſo tranſmuted as that they may afterwards yield a pleaſant ſmell. And although that I made ſome mention of this Work or Operation ſome years ago in the firſt Book of my Philoſophical Furnaces, where mention is made of the Spirit of Salt, yet will I not leave it off ſo, but deſcribe more, yea and compendiouſer ways too in my third part of the *Spagyrical Pharmacopœa*, for effecting ſuch matters, and thereto refer the ſtudious for the preparing of pleaſant and efficacious Medicines.

As for ſuch Animals as ſerve for the Kitchin, as Beef, Mutton, Pork, Hens, Geeſe, and ſuch like, alſo Fiſhes and Birds, they need not much correction. Thoſe of them that are a year old or more may be boiled with Water, Salt, Spice, Wine, and Vinegar, *&c.* the younger may be roaſted on a Spit. Theſe are not hurtfull to ſuch men as are in health, if they feed on them and drink after it a good draught of good Wine or Ale, that ſo they may thereby waſh down into the Stomach any ſuch matters as might ſtay by the way in the Throat, *&c.*

If now any one would make uſe of venomous Worms, and Inſects in Medicines (for ſometimes they perform far more in Medicine than Vegetables can, as experience witneſſeth) they are not to be adhibited without correction. But I do not here underſtand the Kitchin correction, which is done by Wine, Sugar, and Spices; but ſuch an one as in which all the parts remain together, and are corrected and amended by the fiery *Menſtruum*, and that without the addition of any other thing as we taught before. And being on this wiſe corrected, they do not onely ſafely conduce to a Medicinal help in deſperate Diſeaſes, but do alſo become of greater affiſtance and comfort to many a ſick Perſon, and purchaſe to their Authours a greater honour. It is well known even to blind Bayards and Barbars what effects ſometimes the great Earth-worms, *Scarabæus's*, *Cantharides*, *Aſelli* or Pigs-lice, and ſuck like Urine provoking Inſects do effect, being adminiſtred to the ſick, crude, dried onely and ſo powdered; he that deſires to procure a good quantity of Earth-worms, let him but thruſt a ſtick into the Earth, and ſtir it to and fro thereby to diſquiet the Worms, for they will preſently gueſs that the devouring Mole is at hand, and will for fear creep by heaps out of the Earth, ſo as you may then eaſily take them. If any one loaths the Worms themſelves, let him take that Earth which the Worms do caſt out to the top of the ground, after a warm Rain in the Spring time, and is like ſmall bunches; as if they ſhould ſay, give us our lives for this Earth's ſake; and from thence you may extract an Eſſence, which will be as profitable to you as if you took us: *N. B.* The *Merulæ* or Blackbirds ſeeks after this Earth and carries it to her young ones lying in the Neſt, which thing they would not do, did it contain no good in it, but would rather take the Worms themſelves and carry them. A Dog which hath devoured many bones ſeeks out for ſome clean place to dung in, either on a ſmooth ſtone, or on the graſs, as that he ſhould ſay, This do I give you by way of thankfulneſs for the food which you have beſtowed on me, keep it and uſe it according to your knowledge. *N. B.* The greateſt Vertues of Animals are placed in their Excrements, and not in their fleſh. Next the Excrements are the ſuperfluities of the bodies, which (in men) are, the Hair, Teeth, and Nails: In Beaſts, the Hairs, Teeth, Hoofs, and Horns: In Birds, the Claws, and Feathers, *&c.* And that the *May* Worm frees from the Gout and Stone, See Doctour *Wierus*, he hath written a peculiar Treatiſe of the Gout, and of the wandering or moveable pains of the Joints, and of the intrinſecal and hidden Scurvy, and other ſuch like Diſeaſes, and which are commonly accompted of as uncurable; all which he teacheth the removal of, by the means of the *May* worms, or unctious *Scarabæus's*. Nor indeed is it without ground, that there is ſometimes more effected by ſuch abject and contemptible Vermine, than by the moſt precious and highly eſteemed Compoſitions and Vegetables: This now they do crude as they are, and uncorrected. But if the great Earth-worms, and principally their Enemies, *viz.* thoſe black, ſmooth, and many footed Vermine, that ſuck from the Worms their Juice and Strength; and likewiſe thoſe broad, and party-coloured, venereous ſmall Vermine, which we have before mentioned (if all theſe I ſay) be corrected by the fiery *Menſtruum*, they would not onely drive forth Urine, and the Stone, ſafely and without hurt, but would withal moſt notably ſtrengthen the nature of Man, and be a great comfort to many debilitated Gallants. The green *Scarabæus's*, the *Cantharides*, and green Flies, being all of a venereal Nature, do (being corrected) not onely drive forth the Stone and Urine, but do alſo wonderfully ſhew their efficacy in the Feet Gout, wandring Gout, and other grievous Diſeaſes which have already gotten deep rooting: But that black and ſlow creeping *May* worm, or unctious *Scarabæus* doth operate the moſt efficacious of them all, and may be plentifully enough had in the Months of *May* and *June*. The whole knack of the buſineſs doth conſiſt in this, that ſuch Vermine be well corrected with the Liquor Alkaheſt, and ſo prepared before they be made uſe of. As for thoſe great and horned *Scarabæus's*, that live upon the Juice and Roſins of Nuts, Cherries, and Plums, and are wholly of a Balſamick Nature, if they be corrected, I do highly encourage the uſe of them both inwardly and outwardly, *viz.* when the internal and external Members are tormented with moſt vehement pricking Pains and Torments. As for Emmets or Ants they have a wholſome and efficacious Balſam, and are healers both of inward and outward Dolours. But the chiefeſt of them are thoſe that live in Woods wherein are ſtore of Pines, and Fir-trees, and do there feed upon the Roſins of the Trees, and do not as the others do, live upon leaves and graſs, but do in the Summer Months ſtore their little Holes with the ſmall Grains of thoſe Roſins for their Winter food. And this the Inhabitants of thoſe Woods know full well, and do

ſeek

ſeek after it and ſell it the Druggiſts inſtead of Maſtick. For it anſwers to the Maſtick that comes out of *India* in efficacy, vertues, form, and odour, and haply we might not need that Gum, knew we but how to get and uſe this. There is great variety and plenty of ſuch like Inſects as theſe, which without all queſtion may be of great uſe in medicine; but ſeeing they can't be gotten in ſuch plenty as the Vegetables and Minerals may be, the uſe of them is forborn, and rarely are they ſought after. Nor indeed is it neceſſary to ſeek after and fetch from far, ſuch things as we have preſent before our Eyes. The drift of my writing is this primarily, that I may demonſtrate, that there are in the univerſal *Menſtruum*, ſuch vertues as are able to correct all venemous Animals, and deprive them of their Poiſons, and to convert them into wholſome medicaments, for the honour and renown of it, was I even conſtrained to write theſe things. And as to its energetical Operation on venemous Minerals, it is ſufficiently enough known, and doth moſt clearly appear even in its effect upon Antimony alone, the which being burnt twice or thrice with common Niter, is wholly deprived of its blackneſs, and cloaths it ſelf with a moſt white colour, and becomes a Diaphorerick and an all-evil-reſiſting Powder. So is it to with Arſenick and Auripigment, thoſe moſt vehement Poiſons, which may be ſo changed in a few hours ſpace, as that they may be taken afterwards into the Body without any hurt or danger, and will ſubdue and expel the greateſt Poiſons, though indeed there's no neceſſity of making uſe of thoſe venemous Subjects, ſeeing there is plenty enough of other means. 'Tis ſufficient that we have ſhown, that Niter hath ſuch notable vertues, as to be able to invert the venemous Nature of every Vegetable, Animal, and Mineral, and of tranſmuting the Poiſon into a wholſome Medicament. Now becauſe the Animal vertues are more efficacious than the Vegetables, and that the Minerals exceed them both, therefore by good right are thoſe Minerals of greateſt uſe in medicine, which be moſt efficacious, moſt ſweet, and moſt ſafe. But yet we would willingly have the Animals and Vegetables to retain their own dignity and ſtation: And for the better diſcovery of the difference betwixt theſe, and that my Neighbour may be the better and more ſincerely ſerved, neceſſity doth even require a larger explanation. This therefore is generally to be obſerved, that by how much the riper the Minerals be (and ſo 'tis with the Animals and Vegetables) by ſo much the nearer they are to the Sun, and abide therein, ſo much the ſafer and ſecurer may they be taken into the Body. All Herbs, Vermine, and Animals, that delight in a warm Air, and love to abide therein, are never infected or impregnated with ſo great a Poiſon as thoſe are that delight rather in obſcure, ſhady, and darkſome places. For *Napellus*, *Mandragora*, *Cicuta*, and ſuch like Herbs are never, or at leaſt moſt rarely, to be found in other than dark places that are ſhaded over. And ſo the moſt venemous Animals and Vermine, do moſt willingly take up their abode in holes of the Earth, in cold and darkſome Dens; and by reaſon of the want of the warm Air remain venemous, aud do neceſſarily hurt mankind. But being digeſted by the Liquor of fixt Niter, they depoſit their venemous quality and become wholſome Medicaments. So then all the maturation of things conſiſteth in heat, but Poiſon conſiſteth in cold, witneſs Wine and the Fruits of Trees, the which being ripened by the ſolar heat, men may feed on them without hurt, but if they be eaten raw and unripe they corrupt their Stomachs. Now as we have ſaid of Animals and Vegetables, the ſame is alſo to be underſtood of the unripe minerals and metals. By how much the unriper and cruder they be, ſo much the more do they hurt, and are unfit for the making of medicine. And as for metals, they do by little and little, and ſtep by ſtep go on towards their perfection, and end: Like as an Infant doth by little and little arrive to its higheſt degreee of age. And as there is more to be found in a man that is arrived to man's Eſtate than there is in an Infant, ſo is there in minerals and metals that have in long ſucceſs of time attained to their maturity. And foraſmuch as in them may be found, moſt ſafe, ſweet, and efficacious Medicines, I have deemed it neceſſary briefly to detect their dignity and degrees, and ſhew the Ladder as it were, or Scale, wherein the metals ſtand in order, and how by their ſignature that perfection which they have gradually arrived unto, may be known. I do reſemble the mines of metals to a Tree, thus, *Saturn* is the Root, *Mars* the trunk or body, *Jupiter* the bark that covers the Tree over, *Mercury* the Juice that ſticks between the bark and the trunk, *Venus* the green leaves, *Lune* the flower, and *Sol* the fruit. The ancient Phyſicians or Naturaliſts, compared the ſeven principal metals with the ſeven Planets, the which compariſon ſquares notably well with them. For the Planets and Metals have a mutual correſpondency with each other. The Chymiſts aſcribe Lead to *Saturn*: Tin to *Jupiter*: Iron to *Mars*: Copper to *Venus*: Quick-ſilver to *Mercury*: Silver to *Lune*: and Gold to *Sol*: And even as the Planets do excel one the other in brightneſs, vertues, and other things; even ſo do the metals, and this their nature informs us of, and their different ſignature demonſtrates. Verily when the ancients would mark out to us a perfect thing, they deſcribed it under the form of a round Circle: And by how much imperfecter the thing was, by ſo much the leſs rotundity did they give unto it. The Character of the Sun is *Sol*, *viz.* a Circle with a point in the midſt: The Circle denotes the Golds perfection, the point in the middle of the Circle ſignifies the Original of perfection. The ſign of Silver or the Moon was this *Luna*: which conſiſteth of two half Circles, and tells us of its half perfection: So is it with the other ſigns, and ſignatures of the other metals. How much the nearer they approach to a roundneſs, ſo much the nearer are they to perfection, and ſo on the contrary. The Sun being the nobleſt amongſt all the Stars, doth alſo yield and make the nobleſt metal, *viz.* Gold, the which is likewiſe to be obſerved of the other metals. But by how much perfecter the metals be, ſo much excellenter are the medicaments that proceed therefrom. *Saturn* or Lead, is not much profitable for the inward uſe of the body, except it be in the Plague, and in other moſt hot Diſeaſes. Being outwardly applied it dries up the moiſt affects of the body, and moiſt Ulcers, and healeth heat and all the external affects ariſing thencefrom. *Jupiter* or Tin is ſomewhat hotter than *Saturn*, but yet is withal very dry. *Mars* or Iron is hot and dry. *Venus* or Copper is hot and moiſt. *Mercury* or *Argent vive* is hotter and moiſter. *Lune* or Silver is of a midling heat and moiſture. *Sol* or Gold is at length of temperate heat and moiſture. If now any good thing be made out of Gold, it corro-

borates the heart as being the moſt noble member of the body of man. And ſo in like manner, Silver doth the brain: *Argent vive* the Liver: Tin the Lungs: Iron the Gall: Lead the Milt or Spleen: and Copper the Reins. Thus have the ancient Philoſophers and Phyſicians diſtributed the metals and diſtinguiſhed them, the which I leave as I find it, though perhaps ſome of them may yet admit of another diſtinction. But ſo long may they remain (as they are) until *Elias* the Artiſt, ſhall by his coming releaſe us of our Errours. Amongſt the Minerals Antimony is the chiefeſt, in whom the Vertues of all the Vegetables, Animals and Minerals, are collected and concentrated into one, as its ſignature declareth. For the Philoſophers have ſigned it with a round Sphere (by which the Earth is deciphered) and on it a croſs put, and is without doubt for this reaſon, becauſe the Earth never produced any fitter Subject for medicine, and this is atteſted by all true Chymiſts, as may be read in their Writings; but eſpecially in *Baſil Valentine*'s triumphant Chariot of Antimony, being a Treatiſe he wrote in honour of this Mineral. The ſame thing doth that Philoſopher teſtifie, ſaying, common Gold and Silver doe not effect it, but their firſt Ens does it. Now that Antimony is the firſt and true genuine Ens of Gold, is not onely teſtified by all the Philoſophers, but alſo daily experience it ſelf witneſſeth the ſame, from whence it is as clear as Noon day, that Antimony is rarely to be found in any other places but in Gold Mines, nor is there (beſides) any Antimony but what is pregnant with Gold, but yet ſome Antimony contains more Gold and other ſome leſs. Nay farther, amongſt the very Veins of Gold it ſelf is Antimony often met with, and may therefore undeſervedly be ſtiled an unripe Gold. I my ſelf have ſeen a piece of golden Vein, which was digged out of the Gold Mines, and contained ſome pounds weight, in one ſide there was pure Gold, mixt with the hard Flint, on the other ſide was a black Vein of Antimony. There is a place in *Germany* called Gold Granack, nigh which in the *Sudetis* Mountains called *Fichtelberg* by the *Germans*, was found heretofore much Gold, but now at this day is there digged out onely Antimony, cleaving on to the hard Flints and Rocks. And herewithal is immixed a golden Marqueſite, which being ſeparated therefrom, and prepared after a due manner, becomes a moſt excellent Medicament, of which we ſhall hereafter make mention. Further, had we not this teſtimony of a daily experience, yet have we the witneſs of the true Alchymy, which doth moſt aſſuredly affirm, that true Gold may by the help of Art be extracted out of Antimony. Nay more, this incomparable Art, doth not onely perform this, *viz.* of bringing Antimony to the true ripeneſs of Gold, but doth alſo ſo change the Gold (by extracting its Soul) that it is no more Gold, but is plainly indiſtinguiſhable from any *Regulus* of Antimony both as to the form, volatility, nature, and properties of the ſame. And although an infinite number of men will contradict theſe ſayings of mine, yet ſhall they never draw me from this my opinion, for I believe but what my Eyes have ſeen. One Eye-witneſs is of more value than ten hear-ſay ones. Such as do gainſay theſe things, do build on no other foundations ſave ſuch as they have gotten by reading or hearſay, and what will not at all correſpond with experience. Well, I will remain ſtable in my opinion and in very truth demonſtrate, that there is no ſubject to be found in the nature of things, that may be preferred in Medicine, before Antimony, ſo that it be but duely brought into its true Eſſence. I confeſs that whilſt it is crude and as yet unprepared, it is a mere Poiſon, and the uſe thereof is accompanied with a great deal of danger. And ſuch as do uſe the common glaſs of Antimony, and other Medicaments made thereof after a rude manner, and ſo hurt the ſick, muſt impute the blame to themſelves and not the Antimony.

I have mentioned in my *Miraculum Mundi*, and in my firſt part of my *Spagyrical Pharmacopœa*, the preparation of a Medicine out of Antimony, and have called it a *Panacæa*. This now out ſtrips the capacity of very many rude and ignorant men, to whom it ſeems unlikely and impoſſible, that a Medicine of ſuch wonderfull efficacy ſhould lie hidden in ſo contemptible and baſe a thing as to deſerve ſuch a Title as a *Panacæa:* but eſpecially ſeeing ſome unskilfull men, have inſtead of it, adminiſtred to the ſick crude Antimony, and by ſaying it is my *Panacæa* have with a wicked boldneſs deceived men, and have hereby brought an *Odium* and contempt amongſt very many men, upon this true Medicine of mine. Amongſt theſe is that faithleſs *Farnerus* none of the leaſt, yea rather is more eminent or ſtandard-bearer to the reſt, and ſuch a one as may rightly be termed the blot and ſcandal too of other men. For my part, he that liſts may perſecute Antimony with as much hatred as he pleaſeth. But whereas I have already praiſed it, and the thing doth withal concern my Neighbour's profit, I could not omit yet farther to magnifie and exalt it with greater praiſes, and in very deed confirm this truth, *viz.* that ſuch a Medicine may be made thereout of as I have deſcribed, and therefore every one that judgeth of the truth without prejudice muſt confeſs, that there is not a better, an effectualler, or a more harmleſs medicament, and purchaſable by a meaner price, inſomuch that both rich and poor may enjoy the ſame, if ſo be it be but prepared and uſed as it ought. But that he who is ſtudious after good medicaments may withal ſee, that I have not ſpent my labour altogether on Antimony, but on other Subjects too, I will adjoin the deſcription of the preparation, uſe and efficacy of other Subjects, and will take care for the preparation of thoſe medicaments for the benefit of mankind, and of the ſick, and for the diſtribution of them amongſt the needy. For by this means ſhall I ſatisfie my conſcience and ſhall not be accuſed thereby of burying the Talent given me, out of envy and hatred to my Neighbour. And whoever he be that hath any good thing, let him make it common, and being moved with pity and commiſeration become ſerviceable unto his Neighbour. But if he neither hath, nor knoweth ought better, let him deſiſt from contemning this, and omit deſpiſing the things he is ignorant of. And let him not deprive the miſerable poor ſick people of ſuch things as himſelf cannot give, that ſo he may remain an honeſt and pious man. But as touching the Medicaments, which are here treated of, they are indeed but few, however they are ſuch as may next God be ſafely confided in.

I have formerly written of preparing a *Panacæa* of common Antimony, and taught its way of making. But whereas the deſcription is diſperſed in divers tracts, and is obſcurer thereby, and haply one man may not have all thoſe Treatiſes, I have judged it expedient to repeat that deſcription in this place, and to mention it in this Treatiſe.

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The preparation doth for the moſt part conſiſt in the Calcination by Niter, which corrects and changeth the venome and immature Quality of the Antimony. Then afterwards the pure part is extracted by Spirit of Wine, and becomes a tender and ſpadicious (or light-red) Powder, and can effect thoſe things, which I do here aſcribe unto it. It may be taken in a morning before you eat, either in Wine, Ale, or ſome hot Broth, or in a ſoft poached Egg, or roaſted Apple, and faſting ſome hours after it untill its operation be finiſhed. The Doſe is $\frac{1}{4}$ or $\frac{1}{2}$ of a Grain, or 1, 2, 3, or 4, Grains at moſt for one time, regard being had to the Age and Diſeaſe, concerning which, the well minded Reader will find more written, in the firſt part of this *Spagyrical Pharmacopœa*, and in my *Miraculum Mundi*, but yet I will here likewiſe annex it for the benefit of the ſick.

Of the common uſe of this Medicine.

THIS Univerſal Medicine may ſafely and without any kind of danger be uſed in all the natural Diſeaſes of new born Infants, as well as in thoſe of years, and ſtrong people, and may be uſed I ſay without any danger, and in ſo ſmall a doſe as may not move in any one either a loathing or a nauſeate, as theſe large Cup-fulls of the common Potions are wont to do when they are drank down. For that doſe exceeds not 1, 2, 3, or 4 Grains at the moſt, and may moſt eaſily be taken down in a ſpoonfull of warm Broath, Wine, Ale, Water, or Milk, as the neceſſity of the ſick requires. For if this preſcribed doſe be obſerved, it operates after an inviſible manner, and ſtrengthens the radical Moiſture, and purgeth and expelleth out after a wonderfull manner, every hurtfull thing (by little and little) out of the whole body, if it be daily uſed, (or every ſecond or third day) once each day according as the condition, or neceſſity of any one requireth. It defendeth every body from all hurtfull Cauſes and Diſeaſes, and admits not the leaſt venomous Air, but if the Doſe be augmented, it doth alſo diſplay its vertues, by a viſible operation, and drives out by Sweat and Urine, or Spittle, ſometimes upwards and downwards, every noxious thing, and operateth even as you will have it, according as your doſe is either more or leſs, and as your Diſeaſe needeth. A doſe that is very ſmall and void of any viſible operation, is wont to heal many Diſeaſes, yea and the greateſt part of them. But ſome Diſeaſes there be which have deep rooting, and do therefore require a viſible operation, foraſmuch as they cannot be expelled with a ſmall and inviſible operating Doſe. Every one therefore that prepareth and adminiſtreth this Medicine, muſt accurately obſerve this direction, that ſo (having regard to the Diſeaſe) he neither exceed nor come ſhort in the adminiſtration of this Medicament, but by a right uſing of the ſame, he may obtain praiſe and glory.

But that the whole matter may be the better and more clearly apprehended, I will ſet down the uſe of the ſaid Medicine, according as my ſelf have experienced it, in the moſt grievous Diſeaſes, that ſo the ſick may be inſtructed and helped, and the leſs Errours committed.

In the Plague and other raging burning Diſeaſes, and contagious Feavours, this Medicament doth (next God's help) preſerve every one that takes it daily, in this proportion, *viz.* to Infants $\frac{1}{2}$ a Grain, to thoſe of a midling Age, 1, 2, or 3, at moſt. But if any one be infected by either of thoſe Diſeaſes, then the doſe is to be doubled according to the parties age, or trebled, that the ſick being well covered may ſweat. If one time ſufficeth not to free him of this Diſeaſe, the doſe of the ſaid Medicine may be repeated the day following, or the third day, and ſo is it to be proceeded on with, till the Diſeaſe being weakened is caſt forth.

This way of preſervation and curing is not onely to be obſerved in the Plague, but in all contagious Diſeaſes that aſſaults with heat or cold, and in all kind of Feavers whatſoever. The ſick need not any other Medicaments, for this is powerfull and effectual enough; provided you pray ſeriouſly therewithal, that it may (by the help of God) drive away that abominable and deteſtable Diſeaſe the Plague, and the pricking paining Pleuriſie, with the other Feavers. Nay farther, there is no Medicament, no not of the beſt that performs what this can.

In the Epilepſie, or Convulſions of Children, of whom a great Number deſtitute of ſuch help die, this *Panacæa* is a moſt experienced and certain remedy for them, and is to be adminiſtred to a little Infant preſently after its Birth, the quantity of the $\frac{1}{8}$ part or $\frac{1}{4}$ part of a grain, in a little Milk, or elſe in ſome warmed freſh Butter, and is to be repeated again the third and eighth day following. But if it ſhould be ſo, that after ſome days, weeks, or months, the fits do again come, then let your Doſe be ſomewhat ſtronger if the Child needs it, and be ſo often reiterated untill the Diſeaſe be wholly ſubdued and carried off. I do moſt highly commend this Medicine to all Mothers, for that abundance of Infants (otherwiſe healthfull and ſound enough) are without any help, ſnatched away by the violence of Death. And here the error of ſome Phyſicians deſerves to be taxed, who adminiſter to the poor little Babes, whole Glaſs-fulls of the Water of Pearls void of all kind of Virtue. Alſo the Powder of *Bezoar* Stone either with, or without the Water, together with the infuſion of ſuch like unprofitable things.

Such Men as are of riper years, may daily uſe the Doſe of one, two, or three grains, and it will profit them. If not daily then may they repeat it every third or fourth day at leaſt, and ſo continue untill the Diſeaſe being ſubdued paſs away: 'Tis needleſs for them to uſe any other kind of thing, onely to obſerve this direction, *viz.* that day that they do uſe this Medicament, let them ſhun the cold Air, and abſtain from Food three or four hours at leaſt.

In the Leproſie, and other like deteſtable Diſeaſes of whatſoever name they are called by, and in every kind of Scabbineſs, there is not to be found any Remedy, whereby thoſe affects are more eaſily and without any trouble or labour, taken away better than this, which never fails your hoped event, provided the ſick be ſo ſtrong as to brook the Cure.

In that deteſtable and venemous Diſeaſe of Whoredom uſually called the French Pox, there is nothing can be adminiſtred ſafer and ſecurer than this Medicament, if the Doſe be but ſo much augmented, as not onely to cauſe Sweat ſtrongly, but alſo to provoke Vomits and Stools; and you are ſo long to go on with uſing this Medicine every other day, untill the Sick be well, which may be in ſome eight or fourteen days.

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He that is overwhelmed with the Dropſie, may take one Doſe every Day, and for bear eating (for ſome hours) after the uſe of this Medicine, (the which is neceſſary to be done in other Diſeaſes alſo) but let him that takes it ſo as to work ſtrongly, proceed gradually from one grain to two, *&c.* untill it cauſeth a kind of nauſeate (but without vomiting) in as big a Doſe as is needfull, and as the Patient can well bear. Which being thus done, the Doſe is afterwards to be leſſened one or two grains, and the leſſening to be continued untill all the Water be caſt forth by Sweat, Urine, and Stool, and the Sick become as healthy as he was before. Nor is there any reaſon why any one ſhould doubt of radically taking away this Diſeaſe, (except it be plainly deplorable or deſperate) by this my *Panacæa* onely, foraſmuch as experience demonſtrateth it more clear than the Noon-day Light.

In the Gout (a Diſeaſe accounted by the common Phyſicians for incurable, as well as the Leproſie and Dropſie) doth this Medicament perform wonderfull things, and doth effect more in a ſhort ſpace of time than any one would either imagine or believe, provided it be rightly adminiſtred. For it doth in a ſhort time draw back the affluence of noxious humours, and brings them forth out of the Body after an inviſible manner; ſo that, Day after Day, the pains do by little and little remit and abate, the tumours leſſen, and the Fit becomes more tolerable, comes the ſlower, and at length vaniſheth for altogether. As for the Doſe, you are to obſerve the ſame inſtructions that we gave you but now for the Dropſie, *viz.* that you daily make the ſame addition unto one grain ſo long till you cauſe a nauſeate (but no vomit) and then muſt you again leſſen it one or two grains. The Patient muſt do thus daily on a faſting Stomach, (and keep himſelf warm and abſtain from Food four hours, after the uſe of this Medicament) as long as need ſhall require. Haply the things which I here mention, will meet with many incredulous Men, and ſuch as will not believe it poſſible, for ſuch a Diſeaſe as hath been hitherto eſteemed incurable by almoſt all Men, to be rooted out by the aforeſaid Medicament; the Opinion of ſuch Men I confeſs that I cannot take in bad part, foraſmuch as even I my ſelf was but a few years ſince (before I had experienced the wonderfull efficacy of this Medicament) of the very ſame Opinion But after my experience had taught me to judge otherwiſe I do truly and faithfully affirm, that this Diſeaſe is in no wiſe incurable, but may (provided it be not too inveterate, and that the ſtrength of the Sick, either through old Age, or Debilities, hinder not the Medicines operation, or that God himſelf withdraws not his own bleſſing) by a good and ſutable Medicament, be, if not radically rooted out, yet for the greateſt of it expelled. Now it is not to be thought, that he who uſeth this *Panacæa* may be at his choiſe to live as he liſt, *viz.* either ſoberly, or to ſtuff his Stomach daily with hurtfull and forbidden Food, and to ſwallow in Wine as he pleaſeth. No ſuch matter, ſuch Men err moſt hugely, for even the Philoſophers Stone it ſelf, that is, the ſo much famed rooter out of Diſeaſes would not help there. For whatſoever thoſe moſt excellent Medicines do mend in the Fore-noon, and correct, the After noons Surfeiting and Gluttony, and the ſo large exceſs of Meat and Drink, will again deſtroy and corrupt. Nor is there any room for the Opinion of thoſe Men that think to be freed of this Diſeaſe, by a bare Abſtinence from Wine: No, this Diſeaſe comes not always from drinking of Wine, for it is moſt evidently known, that ſometimes even the pooreſt of Men that never drank Wine are afflicted with this Diſeaſe. And therefore the fault is not wholly to be imputed to the Wine. Every kind of repletion or overfilling whether with too much Wine or Ale, may procreate and encreaſe a Diſeaſe, but that is not the onely or ſole cauſe. For there are many other cauſes, from whence this Diſeaſe is wont to ariſe. Verily, often being wrathfull doth moſt vehemently diſturb the Family, as it were, of the internal Bowels. Luſt, and an often uſe of Venery (which is the uſual attender and follower of Drunkenneſs) doth vehemently enervate and debilitate the ſtrength of the body. From hence nature being enervated and debilitated, is not able to expell out of the body the copious relicts and excrements, remaining of the too much abundance of meat and drink, and therefore thoſe excrements abiding in the body and exerciſing their powers without controll, do produce moſt grievous Diſeaſes. For that part which nature is weakeſt in, there doth the Enemy make his firſt attempt, according to the uſual *German* Proverb, every one climbs over the Hedge in that place where it is loweſt The ſame doth for the moſt part fall out in the procreation of this Diſeaſe, *viz.* when the body is loaden and filled with overmuch Food and Drink, for the body being overwhelmed with overmuch Wine, and then an immoderate coition or act of venery preſently following thereon, doth moſt exceedingly weaken the body. For nature being by this means weakned, hath not ſtrength enough to expel thoſe remaining excrements, which ſoon get Head, to the great hurt and detriment of the whole body, and do make themſelves a fixed ſeat, the which is to be well heeded in this Diſeaſe.

Beſides this Medicament doth reſiſt all the obſtructions of the Milt and Liver, (which corrupt the Blood, and ſtir up moſt grievous Diſeaſes, as the Scurvy, Joynt-Aches, Eriſipelas, continued Headachs, weakneſs of the Limbs, a Stinking Breath; and in Women a ſuffocation of the Matrix, a ſuppreſſion of the Months, panting of the Heart, Swounings, the Lipothimy, and many ſuch known, and unknown Diſeaſes) far more efficaciouſly than all other Medicaments do. All theſe aforementioned Diſeaſes are healed by the ſaid Medicine, being taken oftner or ſeldomer every Week according as the Diſeaſe is, and you will ſee wonderfull effects produced.

I commend alſo this Medicament to all thoſe that employ themſelves in Surgery, that they reſpect it as the chiefeſt Remedy that they can get. For being daily given in a ſmall Doſe to thoſe that are wounded, it heals all new wounds in the Fleſh, without the aſſiſting help of any vulnerary potions, and external applications of Emplaiſters that are compounded of ſo very many ſimples. For it withholds all Symptoms, and advanceth healing even from the very bottom, and ſo to the external parts, and doth alſo conſolidate; but this is to be underſtood of thoſe wounds in which are no hurt or broken bones, for as for theſe the manual Art is requiſite, which may again ſet the Bones in their due order and place. Likewiſe deep Stabs are to have Tents uſed to them according as the Chirurgeons order is to apply them. But no external thing need to be uſed beſides, ſave onely the Patients own Urine and Salt-Water, wherewithall the wounds are to be waſhed, and after waſhing, to be

be covered with pure or clean Linnen, that the coldneſs of the Air hurt them not.

But if wounds be dangerous and over great, then may alſo be applyed ſome vulnerary Balſam, and Plaiſters made of the Flores of Minerals and Metals, and done up with Wax, Turpentine, and Oil: (Such Emplaiſters I have taught the compoſition of in my other Writings.) So that there's no need of ſo many Oils, Unguents, Emplaiſters, and ſuch like, to be applyed to new wounds, if this medicament of mine be daily adminiſtred to the wounded Patient.

This medicine doth operate even to admiration in open Fiſtulaes, rotten and ſtinking Ulcers, nor is there any need of outward remedies, ſave haply ſome Mineral Balſam to keep the Ulcer clean, and ſome Plaiſter made of common Wax and Turpentine to keep off the cold Air. For this Medicament doth begin its healing even from the very bottom, and carries it on very ſucceſsfully even to the outer Skin, and doth throughly conſolidate and perfectly cure all Ulcers, without any other external remedies than aforeſaid.

Having then well conſidered theſe things, and that every one cannot prepare the preſcribed Medicine, and yet very many may be found that would willingly partake of the ſame; It ſeemed good unto me to adjoin this admonition, that they that know how to prepare it, be entreated not to count it burthenſome, but rather being moved by a Chriſtian compaſſion, readily make ſuch as are ignorant of the manner of preparing it, partakers of the ſame; And not to mind wholly their own profit, according to the cuſtome of this perverſe world, and the ſcraping up of ſtore of wealth, but to be well content with an honeſt and juſt reward for their charges and labour which they have beſtowed. And foraſmuch as the often ſpoken of Medicament, if ſent abroad either in a Liquid form, or in the form of Powder, into other parts, cannot be in due manner uſed by every body, becauſe an Error may eaſily be committed in the meaſuring of Drops, and in weighing of Grains, and ſo more or leſs be given. I have therefore deemed it very neceſſary to reduce it into Pills, that ſo the leſs Errors may be committed in its adminiſtration; and one Pill weighs one Grain, and two Pills two Grains, and ſo on; ſo that the Patient needs neither to meaſure or weigh, but onely to uſe them as the diſeaſe requires, and as I have before preſcribed, 1, 2, 3, 4, or more Pills at one time.

Theſe now are the principal Vertues of my *Panacæa* made of Antimony. As for the reſt that are beſides theſe, and are (for brevity ſake) omitted, they may be eaſily underſtood and known by every Judicious man, from the before deſcribed circumſtances. I do therefore yet again teſtifie, that all the things that I have aſcribed to this Medicament, yea far more than they, can be done and effected thereby, if it be rightly prepared and adminiſtred; And principally, if the Name of God be ſeriouſly invoked. For prayers and a truſt in God do ſtrengthen every Medicine, and make it happy by his benediction, though the wicked will neither believe it, nor hearken thereunto. Indeed ſome Medicament may, by God's permiſſion, reſtore one (without prayers) to his former health; And ſo may Bread allay hunger without giving thanks, and this we ſee daily done amongſt the unreaſonable Creatures: But this enjoying of the gifts of God is beſtial, and not humane. But this now is truely Chriſtian-like when (in our diſeaſes) the help of God is invoked, and then after that, the Medicine uſed. And this way of uſing of Medicaments is neceſſarily accompanied with an happy event. But if thou wouldeſt perſwade thy ſelf, that every Diſeaſe, how inveterate ſoever, may, by the help of this Medicine, be certainly removed without any difference, thou extreamly erreſt. For we ſpeak here of thoſe Diſeaſes, natural Remedies are able (by God's help) to heal. For ſometimes Man's inward bowels or parts, are ſo ſtuffed and obſtructed with groſs humours, that they cannot be freed by even the moſt efficacious Medicaments. Sometimes the Lungs and Liver are almoſt wholly corrupted, e'er the true place of healing is ſought after. And who, I pray, is able to reſtore the things that are loſt? For Man's inward bowels and principal members do not again grow, being once loſt, as the Crab's ſhells and Spider's feet that are broken off and loſt, doe. Farther, ſometimes God inflicts a diſeaſe upon a Man, whom he will not ſuffer to be cured: Such like Diſeaſes as theſe cannot be taken away with natural remedies. With God all things are poſſible; who alone is able to bring help and remedy in ſuch kind of diſeaſes, whenſoever pleaſeth him? but beſides him alone none can help. There are therefore ſome incurable diſeaſes, which cannot be cured by any *Panacæa*, yet not the Quartane, Leproſie, Gout, Epilepſie, and Dropſie, as moſt men think, though Experience (or the being put on trial) ſhould witneſs the contrary. And although that all humane diſeaſes be, in proceſs of Years and Ages become worſe, and more troubleſome, and doe, together with the augmentation of ſins, encreaſe; Yet the moſt bounteous God hath alſo beſtowed thus much, that there are more and more efficacious and natural Remedies to be found out (by the Divine inſtinct) by diligent men.

It happened ſome few years ago, that an honeſt man's child, of about ſome ten years old, had its Tongue perforated with many Exulcerations, which pained it very much day and night. To cure which, the Parents ſpared for no coſts nor pains, and conſulted with divers of their neighbouring Phyſicians, but they uſed all their Labour and Skill to no purpoſe, for the Exulcerations daily encreaſed with much pain, and grew worſe and worſe; and the poor child, being deſtitute of all help, waſted away. Then, at laſt, they called me to adviſe with them, and having told me how many, and otherwiſe famous Phyſicians, could not by all the labour and pains they beſtowed for full two years do any thing to the purpoſe, but had at laſt left the poor child deſtitute of help and ſuccour. I ſeeing the effect, conſidered that this was nothing elſe but a Corroſive Catarrh ariſing from infected bloud, which did ſo poſſeſs the Tongue, and perforate it, and was the cauſe of this burning, eating, and cancrous effect, and ſo hitherto refuſed any kind of healing, and gave the Parents ſuch an anſwer, that in my opinion there was no better way to meet with this evil, than by ſome purging Minerals, which were capable of working upon even the fix'd humours, and of bringing them away, and that to be done principally by an Antimonial Vomit. The Parents aſſented to my opinion, and requeſted me to begin the cure, the which I did, and firſt I gave a ſmall Doſe of my Antimonial *Panacæa*, not doubting but that it would ſtir up one Vomit at the leaſt; but yet it fell out otherwiſe, for there ſucceeded no ſenſible operation at all: The following day I gave again the ſame Doſe, but without any ſenſible operation too, but yet nevertheleſs all the pain vaniſhed,

and the Child could again move its Tongue, and uſe it, and alſo ask't for Meat, which it had not done in a year before, but was forced to be content with Broths, becauſe its Tongue could not brook any ſolid food. The third day I adminiſtred the ſame Doſe again, and ſo the Exulcerations began to be conſolidated, and all the whole Tongue was throughly healed in eight days ſpace, inſomuch that there ſcarce appeared any place where it had been ulcerated; and the Child daily grew better and better, its natural Colour returned, the which drew all that knew it into admiration as well as my ſelf. By this Cure that I have told you of, the vertue and efficacy of my *Panacæa* did farther manifeſt unto me what I knew not before to be in it, nor ſhould ever have believed it, (had I not perceived a manifeſt operation) *viz.* that the Bloud ſhould, by the help of ſo little Medicine, which was not in all above ſix grains, be able in ſuch a ſhort ſpace of time to effect ſo much; And afterwards I perceived the ſame effects in other Diſeaſes likewiſe, and found that the daily uſe of this Medicine did not onely ſhew its operation upon the Tartar in the Reins and Bladder not as yet coagulated, but did by little and little leſſen the already hardned Sand and Stone, and in length of time expell it: And did alſo in ſucceſs of time reſolve and root out even Podagrical inveterate humours.

But thus much may ſuffice to have been ſpoken of the common Antimonial *Panacæa*. This name *Panacæa* hath made ſome envious men ſtare, and ſuch as judge this Medicament unworthy ſuch a name, ſeeing it is prepared out of ſo vile a ſubject, and doth withall ſometimes (when too unskilfully handled) ſtir up vehement Vomitings, which is not the property of a *Panacæa* to do. That I may anſwer ſuch, I ſay, that the name *Panacæa* denoteth ſuch a Medicament as may profitably be adminiſtred in all Diſeaſes, the which thing the *Panacæa* of Antimony is alſo wont to doe as daily experience teſtifies. But as for its being taken out of ſuch a vile and (by many brethren in ignorance) deſpiſed ſubject, that doth not at all derogate from its Name, provided that the Medicine thence drawn performs thoſe things that are ſpoken of it. Pray what brought *David*, that contemptible Shepherd, unto a Kingdom? was not he of a low name, and low birth: the ſame is to be underſtood of this Medicament. It is its moſt noble efficacy and operation hath given it this name, and not its vile birth, nor contemptible nativity and abject form. Neither is this any lett thereunto, *viz.* that it is prepared out of a mean ſubject, and ſuch a one as the ignorant contemn and deſpiſe, and which (before its preparation) was a Poiſon; for the Poiſon is now tranſmuted by the help of Art, and of the fire, into a wholſome Medicament, and the more ſtrong operation thereof, ſuch as to cauſe vehement Vomits, is not to be imputed to the Medicine it ſelf, but unto the abuſe of it. For ſo the beſt Wine and moſt fragrant Spices, are a poiſon to ſuch as do abuſe them. Abuſe may turn the beſt Medicine into Poiſon; and Art and Fire, both can and uſually are wont to turn Poiſon into a Medicament. That which I have often ſpoken, I do here again repeat, and call God and the Truth to witneſs, that I never met with any ſubject, that might with more profit be tranſmuted into a wholeſome Medicine, than the vile and contemptible Antimony; The which I will take care to ſee it prepared ready for the Poors uſe: And as for the Rich, to them I commend the Golden Purple-coloured *Panacæa*, which hath the ſame efficacy as the former has, but herein differs from it, *viz.* it operates more gently, and is leſs ſenſible in the operation, and may be far more ſafely adminiſtred unto Infants and old Men, and may be doubled in the Doſe. Some few years ſince, many men of high and low degree have by the help of this Medicine been freed, not onely from the Gout, but from other grievous and inveterate Diſeaſes: Nor have I ever heard ſince the time I have prepared it, for my Neighbours benefit, that the uſe of it wanted ſome good effect: Nor is there any cauſe to fear offending by the abuſe or exceſs thereof, as is in the vulgar Antimonial Medicament. But this Golden Medicine will rarely ſtir up Vomiting in the ſick, unleſs a due meaſure be by a wanton abuſe exceeded, or the Doſe too too much enlarged. For this reaſon I will hereafter have by me, for ſuch as need the ſame, this Golden Medicine, in the form of a Purple Powder, and the common Antimonial (becauſe that it being like a red Powder may be eaſily counterfeited, and ſo ill-prepared Antimony may chance to be ſold to the ſick inſtead of a *Panacæa*) ſhall be ready made up in Pills, and in that form onely, each of which ſhall contain one Grain, that ſo being ready weighed the ſick that uſe them may receive no detriment by weighing and ſo taking them. Theſe now may be uſed by ſuch men as are of a midling age, or elder; but to thoſe that are Infants, and aged, and weak perſons I commend the Golden, as operating more gently and ſafely. The Antimonial *Panacæa* made up in a Pillular form, may be moſt exceedingly profitable in thoſe long *Eaſt* and *Weſt-India* Navigations, in which the Souldiers and Mariners are ſo extreamly troubled with the Scurvy, and debilitated thereby, and yet have ſo little benefit or help from the Medicaments which they carry with them. Now this Medicine is able ſo far to help them, as that they may make their Navigations with a more courageous and more cheerfull mind. For I have not hitherto met with any ſubject in the whole nature of things, that can oppoſe it ſelf with greater efficacy againſt all the corruption of the bloud, and oppilations of the inward members, than this Medicine; the which both Souldiers and Marriners may have with them, it being not very dear, nor eaſily corruptible, and ſo make uſe thereof in neceſſitous Caſes. There is not to be found in the whole World a more commodious and more wholſome Medicine, as well for the Marriners that ſail for many Months in the vaſt Ocean, as for the Souldiers lying in Camps, that undergo troubles and diſcommodities of all ſorts, and lead a diſorderly life. And therefore if Chyrurgions that be in Ships and Camps were furniſhed with this Medicament, they would verily preſerve the lives of many Marriners and Souldiers, and would with one onely Ounce, which is of no great price, out of which may ſome Hundreds of Doſes be made, eaſily effect far more than with a whole Cheſt full of ſuch Medicaments as are but of ſmall virtue. If a Phyſician or Chyrurgion, that follows the Camp, had by him ſome Ounces, he would preſerve the Lives of many Thouſands of men, which would otherwiſe miſerably periſh. It is a Medicine of eaſie carriage, and as eaſily kept, which is a thing deſervedly to be accounted of, ſeeing it much concerneth him who is a Commander, to have at hand ſome preſent remedy for his Souldiers that are uſually oppreſſed with the Plague, Scurvy, Dyſentery, malignant Feavers, and other ſuch like diſeaſes, with which whole heaps of them periſh, as Flies do in a cold ſeaſon. This incomparable

comparable Medicine doth eaſily reſiſt all thoſe diſeaſes. Upon this account I will have ready by me for time to come, good ſtore of this Medicament, and ſuch as need the ſame may ſeek it from me, and be made partakers thereof. I will perform the office of a good Chriſtian, who being not born onely for himſelf, but for his Neighbours too, ought to be helpfull unto them, even as the hand helps the hand, and one member he'ps another, the which thing verily every one ſhould neceſſarily (and well worthy is it to be) obſerve more carefully.

Next this Antimonial Medicine, in the form of Pills, and the Golden *Panacæa* (of a Purple Colour) follows, my *Nepenthes*, or Anodine medicament, allaying all Pains, and is made of corrected *Opium*, extract of Saffron, and the Volatile Sulphur of Vitriol. Every one knows that *Opium* is ſtupefactive and ſoporiferous, becauſe ſo much mention is made of the correcting and preparing it, and the way, deſcribed by many, of ſo doing; For they well perceived, that it being ſometimes imprudently adminiſtred, did not onely cauſe ſleep, but brought alſo the brother of Sleep too, *viz.* Death, inſomuch that the ſick being caſt into an everlaſting ſleep, could not be awakened any more, (for it is a praiſe-worthy Medicament, and ſuch an one as will beget credit enough;) and therefore they not knowing how to take away this Poiſon, did bend their ſtudies thereabouts more and more, to correct the *Opium*, and to tame the venomous force it had. Therefore they dried it throughly, and reduced it into Powder, and diſſolved it with Spirit of Wine or Vinegar, and extracted it, and by diſtillation abſtracted theſe *Menſtruums*, and brought the extracted *Opium* to the conſiſtency of Honey, and thereto admixed a certain portion of the beſt Saffron, wherewith they endeavoured to tame and correct the venomous quality of the *Opium*. Others mixed that Powder with Oil of Anniſeeds, Liquid Storax, or extract of Saffron, (which are Simples that will procure Sleep without *Opium*) and made it up in a Maſs, and accounted it a moſt excellent confection, as being every-where hitherto in the Apothecaries ſhops, and uſed by the Phyſicians with good ſucceſs, ſometimes in many deplorable diſeaſes: And is even to this day (and deſervedly too) in uſe, for there could not be found a better and more ſafe one. But now foraſmuch as a better and ſafer way is found out, 'tis but juſt to admit of this, and omit the other which is not ſo good. Since the time that I knew the uſe of the Univerſal Diſſolvent, or moiſt and cold Fire, I found out and corrected many Subjects by the help of the ſame. And amongſt others, I diſſolved *Opium* in the Liquor of Niter after my way, and prepared it, and perceived wonderfull effects therein, but eſpecially when I adjoined to it the Volatile Sulphur of Vitriol, which is of it ſelf an excellent and incomparable Somniferous Anodine, allaying all Pains with a wonderfull ſucceſs. I alſo hereunto added the Eſſence of Saffron, a wonderfull ſtrengthener of the Heart. *Opium* being uncorrected, is a vehement Saturnine ſtupefier, which doth by its immoderate ſtupefying property conſtringe as it were and choak the Vital faculties, inſomuch that the often uſing the ſame make men pale, and to ſleep (for the moſt part) with their mouths and eyes open, and they can hardly be awakened before the operation thereof be over: And therefore many do deſervedly abhor the uſe of the ſame. The adding of the Oil of Anniſeed and Saffron, may in ſome ſort reſtrain the cruel rage of it, but cannot throughly ſubdue it; But yet even this may be done with eaſe, when being reduced unto Powder, it be diſſolved with the Volatile Spirit of Vitriol, inſtead of the Spirit of Wine or Vinegar, and ſo ſtrained through a Paper, and precipitated with the contrary (or different nature) Liquor of Niter, and be waſhed with common Water, be dried and prepared into a Maſs with the Eſſence of Saffron, in which operation the Narcotick Sulphur of the Vitriol adjoins it ſelf to the *Opium*, and this is far better, and corrects it by its ſulphureous and acid Spirit. But that the Spirit of Vitriol is moſt fit for this effect, I will ſhew the well-minded Reader. The common Vitriol doth, for the moſt part, conſiſt of a Sulphureous Salt, and of an Earth containing Iron or Copper. But when it is diſtilled by the Fire, the Spirit of the Salt carrieth up with it a Volatile and Sulphureous Spirit out of the *Mars*; the which being precipitated with ſomewhat that is of a contrary nature, affords you a ſubtile Narcotick Sulphur, very little in quantity, but of a moſt wonderfull efficacy, the which I have made mention of in the Second Part of my Furnaces. But if now there be added to the Calcined Vitriol an equal weight of Iron filings or Iron cinders, ſuch as are ſmitten off from the red-hot Iron on an Anvil, and half a pound of Salt-peter, and a water be diſtilled out of theſe matters thus conjoined, the Spirit of Niter will bring over a great portion of the Spirit of *Mars*. This Volatile Sulphureous Spirit is to be ſeparated from the Corroſive Spirit by rectification, and to be diſtilled into a Receiver that has in it a little fair water. This Volatile rectified Spirit, and not that corroſive one that was left behind in the rectification, is to be uſed for the diſſolving and correcting of the *Opium*. And although that many diligent Chymiſts have before now underſtood ſomewhat of this Narcotick Vitriol, as I my ſelf did, yet we have done but little as to the preparation thereof. But at length when on a certain time I had added Filings of Iron to Calcined Vitriol, to diſtill thence from an *Aq. Fortis*, my Retort being very red hot, did by chance break, ſo that the matter fell out into the fire, out of which proceeded ſo ſulphureous a fume, and ſo much, and ſo filled all the Laboratory that I could not ſtay in the Room; therefore I took the live Coals out of the Furnace, as ſpeedily as poſſible I could, becauſe of the ſuppreſſions and difficulties (of breathing) which that Spirit overwhelmed me as it were withall, and hardly got my ſelf out of the Laboratory-door, but having got a little freſh Air, I preſently came to my ſelf again, and perceived that the whole Houſe was filled with the fume, and therefore to let it out, I opened all the windows and doors of the Houſe. When I had thus done, preſently hapned another danger, for the burning Coals that I had pulled out of the Furnace, had kindled the other Coals that were next them; There being danger of fire, and that I might prevent it (being deſtitute of water, and in the night-time hapning) I ran to the reſt that were ſleeping in the Chamber, to get them to ariſe and fetch water, and to help me quench the fire. But they ſlept ſo exceeding ſoundly, that though I called and did my beſt to awaken them about quenching the fire, yet was I forced to go about it my ſelf, and do it as well as I could. Having quenched it, away go I into the Chamber to ſee what they were doing of, and I found them all oppreſſed with a moſt heavy ſleep, yea and the ſweat dropped from all their faces, though it was Winter-ſeaſon. When

it was light they awoke and aroſe, to whom I told the danger I was in, and that I could not awaken them. They all of them confeſſed that they dreamed that they were oppreſſed with ſome heavy thing, ſo that they could not ſtir themſelves. From this miſchance, learned I two things, the firſt is this, *viz.* that in Vitriol and Iron lay hid an highly Narcotick Sulphur: The other was this, what the cauſe is that ſome Men but eſpecially melancholy Men do in the Night Dream, that they are ſo oppreſſed with ſome thing, and yet cannot be awakned. For the Sulphureous martial and ſaturnine Vapours which caſt the Brain and Heart into ſuch ſtraits, and do bind as 'twere the vital Spirits with a Cord, do cauſe ſuch Dreams. This breaking therefore of my Retort, diſcovered to me an excellent Medicine, and the Diſeaſe ſubject to the ſame, ſo that there is nothing ſo evil out of which ſome good doth not ſometimes ſpring up. I judged it worth my labour, to gratifie thoſe that are ſtudious in Medicine by adding to the aforegoing things, this ſtory, hoping it will not be a thing tedious to any. Beſides this is worthy of conſideration, that hapned to one of the Children ſleeping in the ſame caſe, whoſe head was much troubled with phlegmineſs, but the Catarrs were ſo diſſolved and looſened by the efficacy of this fume, that it was ever after of a ſound head. From hence did I conjecture that there was more to be found in the Sulphur of Vitriol than can be believed, and this did I conjoyn with the corrected *Opium*, by the often uſe of which Medicine, I have freed many Children from the Epilepſie or Convulſions, and found beſides that it was moſt exceedingly profitable for old Men, and ſuch as were of riper years; But with this proviſo, that my Antimonial *Panacæa* be firſt adminiſtred, to thoſe of a midling Age, and my golden *Panacæa* to Infants and old Men, which being premiſed or firſt uſed, this moſt excellent *Nepenthes*, can by ſo much the better and more commodiouſly diſplay its virtues. By this Medicine all internal pains, a diſquiet mind, and light headedneſs in Fevers, are allayed, a quiet and gentle ſleep procured, the Winds and Gripes of Infants and elder Men, that afflict their Bellies and Inteſtines are driven away, a good ingeny and chearfull mind is procured, all wild and unquiet Spirits that moleſt the Heart and Brain are reſtrained and laid a ſleep: The vital Spirit being overcome and ſuppreſſed with corrupt humours is reduced to its former liberty, and the loſt ſtrength and vigour of the Body ſo happily reſtored, that a moſt evident help is preſently perceived, and principally if the *Opium* be well corrected by the help of the volatile Spirit of Vitriol. It may likewiſe be profitably corrected by the fix'd Liquor of Niter, extracted with Spirit of Wine, and be reduced into an Eſſence. But if this correction be made by the acid Spirit, it is better and more profitable, than that made by fixt Niter. For in correcting it by the fixt Niter, the corrected Eſſence is to be extracted by Spirit of Wine, which makes the powers of the *Opium* too volatile and penetrative, the which thing we ſeek not after in this place, being it is far better, that the *Opium* ſets upon his enemy leafurely and not too ſtrongly; and this experience ſufficiently teſtifies the neceſſity of. This moſt excellent medicine is one of the four Cardinal Pillars, whereon the whole fabrick of medicine is built. The Antimonial *Panacæa* is a moſt excellent and ſafe purge, moſt fit to drive out all the evil humours out of the whole Body. The golden *Panacæa* is the beſt and moſt excellent Diaphoretick and Sudorifick. But the corrected *Opium* and vitriolate Sulphur is the moſt eminent Anodine and Somniferous Medicament.

A Diuretick and Nephritick, extracted by the help of a certain proper Vegetable Spirit, and endued with excellent Virtues.

TAKE of Cantharides one ounce, *Aſelli* or Hog-Lice two ounces, put into a Glaſs, and pour upon them three ounces of the Spirit of Niter, and diſſolve the Vermine in a gentle heat, that they may be reduced into Water, which will be in few hours, or elſe leave them in a Cellar for ſome days and nights, and they will be diſſolved as well as in the heat. Afterwards add to this Solution three ounces of Earth-worms and leave them yet for ſome days more in the Cellar. When they are all diſſolved ſtrain them through a fine Linnen Cloth, put in a Funnel of Glaſs, that the Solution may be ſeparated from the Fæces, which if many, ſqueeſe well the Cloth with your Fingers, that the whole Solution may be ſeparated from the Fæces, then throw away the ſaid remaining Fæces And to the Solution that you ſtrained through the Funnel into the Glaſs, pour the Liquor of fixt Niter by little and little, and ſo long untill all the ebullition ſhall have ceaſed, and a thorough precipitation be made. All things thus done, ſeparate the Liquor by pouring them off from the Vermine, and coagulate it, that it may be again made Salt Peter, and be uſefull for more occaſions. Waſh your precipitated Vermine well with common Water, thereby freeing them from all ſaltiſhneſs, and dry them in a gentle heat, that they may be reduced into a pillular form, or into an Electuary: The which medicament may be moſt ſafely and without all danger uſed in the Stone, of the Bladder and Reins, being given from one, two, four, ſix, eight, and twelve grains at moſt, according to the condition of the Sick: For it brings forth the Urine and the Sandineſs and Tartar; that is, as yet uncongealed, and not lumped together in the Reins and Bladder. If any one deſire to have them ſhew their Virtues more ſtrongly, he may then extract the diſſolved, precipitated, waſhed, dryed, and corrected Vermine with ſome burning Spirit of Saxifrage, Parſly, Juniper-berries, Aſh, or ſuch like Stone expelling Herbs, that ſo there may be yet again a ſeparation of Fæces, and the Spirit may draw unto it ſelf the pureſt Eſſence. This Spirit being ſeparated by a gentle heat in a B leaves in the bottom an Eſſence like a red Balſam, which is far ſweeter, profitabler, and pleaſanter in the forenamed Diſeaſes, than it was before the extraction, when in the form of Powder, Pills, or Electuary. *N. B.* If a venereal Medicine be to be prepared out of the Earth-worms, then the Cantharides and *Aſelli* are to be omitted, and an half part of thoſe venereal Vermine, which are in the Summer Months in Gardens, and adhere to old Seats, and old Walls in abundance, to be added to the Worms, and to theſe is to be added one fourth part of a Stags Pizzle and all to be prepared after that manner we have taught and preſcribed. The Worms are to be gathered at ſuch a time as the Earth firſt opens it ſelf after the cold Seaſon, and may be dig'd out, that ſo you may have the Worms before they creep forth out of the Earth, and have enervated each other by their coition, for when they are thus gotten they are endued with wonderfull virtues, and are far more efficacious than they

be

be afterwards. Theſe Worms being diſſolved, precipitated, and well waſhed with common Water; if they are yet once extracted by the burning Spirit of Satyrion, Hop, or Sparagus-roots, and reduced into a ſweet Eſſence, do become a preſent and effectual Medicament againſt impotency.

All Diuretick and principally Earth-worms being maturated and corrected, have a power to ſtrengthen the venereal faculty. But the correcting of them muſt not be after the uſual Kitchen way of Women, where Wine, Sugar, Spices, and ſuch like things are added to correct any ſubject by. No, but it is to be done by the benefit of Fire, after a Philoſophical manner, without the addition of any other things, not with the Kitchen Fire, but with that Philoſophical, moiſt, vaporous, digeſting, altering, penetrating, ripening, amending, conſerving, and in one degree always abiding Fire, the which is to be ſought after in Niter. Great is the errour that is committed in the decoctions of Vegetables, when Herbs, Flowers, Seeds and the like are boiled in ſome Liquors, as Water, Wine, Ale, and the like, and being boiled the decoction is given the Sick to drink, as if it had extracted all the virtues of the Herbs; nor is it in the mean time conſidered that in ſuch decoctions, the penetrating and effectual Spirit, and ſweet Oil vapoured away with the water into the Air, and yet may this be eaſily ſmelt, for the Vapour that goes out in ſuch boilings is always endued with a ſweeter Odour than the remainder left behind is, and which they uſe in Medicine, and this can be denied by none. Why I pray are the Waters in the Shops, where abundance of them are uſed, and ſold, wont to be diſtilled now, not any more in a B. *per ſe*, but for the moſt part, in a Copper Still with common water added, to prevent burning too; of which waters it is likewiſe ſaid, that they are as good as thoſe that be diſtilled in a B. *per ſe*, without Water, and this is agreeable to truth: For in the diſtillation, the moſt ſubtil moiſture of the herb onely riſing up, and the common Water (as being the heavier) ſtays behind in the bottom of the Still, and therefore they have a certain ſign in the diſtillation of the ſaid waters, *viz.* when the aſcending water, taſts no more of the diſtilled herb: Then do they deſiſt from farther operating, and caſt away the remaining herb with the water in the bottom. But ſuch whoſe ſtudy it is to make ſweeter and more efficacious Waters, do take the water which came off in the diſtillation, and pour it upon more of the freſh herb, and do again diſtil it, and draw off the moſt pure part of the herb, and make their Water more efficacious, which way of preparing the Waters of Herbs, is good and profitable. Beſides every one knows, that the Spirit and Oils of Vegetables, are to be diſtilled by a Copper Still by the appoſition of a great deal of Water, as we have taught in the firſt part of this *Pharmacopœa*: It is therefore manifeſt, that the common decocting of herbs in water is of no value, and that the beſt part vaniſheth away into the Air in boiling, and that the leſs ſweet, and moſt efficacious part alone remains behind. Some skilfull Cooks know this full well, and never put in the Spices into the Pot to boil, but let the fleſh be firſt boiled, and already ſet at the Table, by which they take care of loſing the beſt Odour of the Spices by boiling them. If you go by the Ale-Brewers when they are boiling the Hop, and the Houſes of the Apothecaries, you ſhall meet with a far ſweeter fragrancy, and what doth more comfort the heart, than what remains behind, and is given men to drink? And this cannot be otherwiſe, by the fore alledged reaſons, for the chiefeſt and beſt part go away in boiling. Therefore I do here again repeat what I ſaid before, and do affirm, that that Decoction which is done in the cold by the univerſal fiery Water, is to be preferred far before that otherway. Now it is ſufficiently enough known that the greateſt part of the food we eat, whether Fleſh, Fiſh, or Pulſe, are wont to be boiled in the Kitchen by the help of Water to preſerve them from burning, that thereby they may be the better digeſted and concocted by the Stomach. And why are not medicaments prepared after the ſame manner? Now though in the decoction of Fleſh, Fiſh, and Pulſe, there goes off ſome of the vertues of the ſame, yet that is a matter of no great moment, for the remainder is what ſtuffs the Stomach from whence the body may get its nouriſhment. But in medicinal decoctions, no ſuch great quantity is to be adminiſtred, but a little of them given to the Sick to drink of; and therefore they muſt neceſſarily have their vertues left in them, and not be deprived of them by decoction, and yet this Curtation of theirs cannot be ſhunned when the decoctions are done over the fire with common water in open Veſſels. This way therefore of mine, by the fiery Water is far to be preferred before that other way. For in this decoction there can't be loſt ſo much as the leaſt vertues of the herb or Animal, ſeeing it is done in the Cold. But all abide together, in the watery or fiery Water, are ripened, bettered, and changed into medicine, and muſt neceſſarily be tranſmuted, whether they will or not. There is no way for the vertues to go off as is in that other decoction, where the moſt noble vertues vaniſh away in the Air. Therefore this digeſting, conſerving, ripening, and amending Fire and Water ought to be highly eſteemed by the Phyſicians, wherewith they may prepare their medicaments, or at leaſt for the preparing of ſome few good ones which cannot elſe be gotten, as is apparent in Diureticks, which being ſo inverted by this Philoſophical water, do not onely afterwards expel Urine, and the Stone, and all things pertaining thereunto; but do alſo corroborate, even as all things that have a hot ſubtil and penetrating Nature whether ſimples or compounds are wont to do: Inſomuch that they do not any more cauſe torments and pains by a forceable expulſion of Urine and the Stone, but do gently and ſweetly ſtir up to a caſting them out, and do withal ſtrengthen and conſerve the virile Nature: But contrarily thoſe immature and crude Simples, do by their Crudity and Wildneſs hurt, and not onely expel Urine, but even ſtir up pains. This diſcourſe and propoſed matter, concerning the watery Fire and fiery Water (by the benefit of which venomous Vegetables, Animals and Minerals may be (as I have taught) turned into wholſome medicaments) will haply create in many ſome diſagreeable Cogitations, and may ſeem to them as if it were a ſtrange thing, that I ſhould call the Liquor of fixt Niter, and the Spirit of corroſive Niter, fiery Waters, and watery Fires, whereas there is in them no apparent viſible Fire. Well, to remove this Scuple from their minds, I do in the firſt place judge it expedient to demonſtrate that Niter is no other than a mere Fire; For put but Niter on a live Coal, and 'twill all flie up and burn away in the Air; this now is evidently ſeen in Gun-powder, in which the Salt-peter is together with thoſe other added matters diſcharged all of

it into the Air. Niter being brought by Calcination to a fixity or conſtancy in the Fire, or elſe by diſtillation to a corroſive Water, hath not for all this loſt its fire, but hath it as yet perfectly with it ſelf. And that this is true is hereby cleared, *viz.* that both thoſe Liquors the fixt and the corroſive volatile one being mixt together, do depoſit thatnature they got from the Fire, and do return to their form, or Salt-peter nature. Hence may it be manifeſtly proved that both theſe Liquors as well the fixt one as the acid Spirit may and ought to be called fiery Waters, ſeeing that they do in very deed demonſtrate their fiery vertues. For they do yet retain their Fire, and do melt all things and reduce them into Water, whatſoever you put into them. This demonſtration I hope is a ſufficient ſatisfactory teſtimony to ſuch as have any underſtanding though not ſo well skilled in the light of nature. But that I may yet meet with the moſt unskilfull of men, who are for the moſt part wont to meaſure by their moſt unskilfull fancy, ſuch things as are to them wholly unknown, and that I may ſet it moſt clearly before their Eyes, that the ſaid Waters are mere true Fires; I would perſwade them that for trial of the truth they would put one little drop onely or one ſmall piece of a Grain upon their Tongues, and ſee whether or no they will not in leſs than a moment of time find, and ſay that that Fire is hidden in the Water, and is juſt as if their Tongue had been touched with a Coal of Fire. But if they would ſee the very flame it ſelf, they may coagulate or concenter either both or either Liquor, either by Antimony or *Lapis Calaminaris*, by which all Corroſives do chiefly love to be concentred, and to put off their adjoined Waters. Therefore when you have a mind to ſee a flame pour upon your concentrated acid Spirit, or on your fixt Liquor of Niter, the pure Spirit of Wine, and what is ſeparated from all Phlegm: By which pouring on, the hidden Fire of the concentrated Niter, will forthwith manifeſt it ſelf, and will kindle and burn up the Spirit of Wine. If he would yet farther try the truth of this thing, let him fix Niter by *Regulus Martis*, and coagulate it into a fiery Maſs, and keep it in a ſtrong earthen Veſſel well ſhut, that ſo the Air enter not therein, and that the Fire may remain ſo long hidden as he pleaſeth. Now if he would have it grow hot, let him pour in a little water into the Veſſel, which done the hidden Fire will become preſently manifeſt, and make the Veſſel ſo hot, that it cannot be held in ones hand: By how much the more the Water is that is poured thereupon, ſo much the hotter the Veſſel becomes, ſo that by the too much effuſion of water, there is danger of the Veſſels breaking into Pieces. A mean therefore is to be obſerved in the pouring water on, if you would have your Veſſel endure the longer, and give a laſting heat. This ſecret doth not onely teach the Miracles of Nature, but is likewiſe profitable for ſuch as journey in the Winter Seaſon, whether in a Wagon, or a Ship, day and night, in exceeding cold Weather, for by the help of ſuch a Veſſel may they heat themſelves. For if they have a Veſſel containing about one or two Pounds of this concentrated Fire, it will keep heat for 24 hours: And ſo in caſe of neceſſity ſuch as Journey may have with them greater and more Veſſels, and not be ſcantied of this Fire. And if in the extremity of cold they want water, they may heat the Veſſel by ſtirring up the ſame Fire with their own Urine. How vile ſoever this ſecret appears, yet lies there in it a great myſtery, and what is ſerving to true Philoſophy, and in which ſuch a Fire lies hid as was buried by the Prieſts, mentioned in the *Maccabees*, and after ſome hundreds of years again digged out and found. For ſuch a kind of Fire being fenced againſt the acceſs of the Air, remains uncorrupt for 100, yea a thouſand years, and this verily is a thing moſt worthy of diligent conſideration. We have by what has been ſaid ſufficiently demonſtrated that fixt Niter is a mere Fire, and that it manifeſts it ſelf ſo to be whenſoever any one is ſo minded as to try. The acid Liquor doth the ſame, and hath a far different nature and property from the fixt Niter, the which nevertheleſs doth alſo produce to light its occult Fire according as the Artiſt pleaſeth, and is on this wiſe done. Diſſolve in it Iron or *Lapis Calaminaris*, and draw off the moiſture by Fire, *N. B.* You ſhall have nothing elſe come over or evaporate ſave onely a ſweet water void of all taſt, and the fiery part will concenter it ſelf in the Iron or in the *Lapis Calaminaris*, and become a fiery and dry Earth, the which being preſerved againſt the ingreſs of the Air, will remain dry, nor will it ever change it ſelf into water. This fiery Spirit thus concentrated in this Earth is ſo burning hot, that if it be put to the Tongue in no bigger a piece than a Hempſeed, it will burn it juſt as if you had touched it with an hot Iron. And if you would have fire thereout of, pour in ſome Spirit of Wine, and you ſhall ſee the flame break out: But if you would warm your ſelf with that heat, as we before ſpake of in the fixt Niter, then put in a few drops of water, which done, the hidden and concentrated Fire will become manifeſted (as in the fixt Niter) and continue a long while, if there be not too much water poured thereupon. If you would quench your Fire and have the Veſſel cool, then ſhut it, and if you would have it again hot, then open it and pour on a little water. Thus therefore ſhalt thou have this Fire moſt ready for thy uſe whenſoever thou haſt a mind to employ it. So then all theſe things do moſt abundantly confirm that the acid Spirit of Niter is a cold and hidden Fire, for if you put into it a little piece of Iron or *Lapis Calaminaris*, it will make the glaſs ſo hot, that you cannot hold it in your hand. We hereby learn that from this Original do the Baths ariſe, and is thus. When an acid mineral Spirit joins it ſelf in the Mountains to ſome Fountain of ſweet Water, and doth together therewithal paſs through ſome Mines of *Lapis Calaminaris*, or Iron, it becometh ſo hot that it breaks out like water heated in a Copper. Nor are Baths any where to be found ſave in Mountains, and in places that abound with *Lapis Calaminaris* or Veins of Iron, as may be ſeen in many places, but eſpecially in that of *Aquis Granum*, where the moſt curious or braveſt Baths of all *Europe* are found to be, and the Mountains that lie round it do abound with Iron, and *Lapis Calaminaris*. But as concerning thoſe other profitable and gallant Secrets, that lie hidden in this concentrated Fire, 'tis not expedient to ſpeak of them here. We have revealed to you enough already, and he that learns nothing hencefrom, ſhall have nothing, nor is it given him of God to know the unſearchable properties of this Fire, and to open the Gate of true Philoſophy and Hermetical Medicine. Here then the Son of Art ſees what a concentrated Fire is able to effect, and how its many vertues are as yet impeded by reaſon of the Earth, (conſiſting of the Iron *Calaminaris*, and Antimony) wherein it is included

cluded and hindered from anſwering the event that may be hoped for from it. For an impure body is able even to make a pure Soul inhabiting in it, ignoble and impure, yea and plainly to kill it; and this may be underſtood as well of Men as Minerals. Now it may be eaſily conjectured what ſuch a pure Soul, and which is ſeparated from all Fæces is able to do. Things incredible and almoſt Divine may be effected by ſuch a Fire. The Fire of common Wood and Coals, if concentred will perform things wonderfull. But I pray what then will the concentred Fire of the Sun do, which is a thouſand times purer than that. Next after God, is the Sun, next the Sun the Fire of Coals and Wood, is of all things in the whole World, the moſt noble. Were it lawfull openly for me to declare my opinion of the Fire for the rude and unskilfull to underſtand, I ſhould enlighten many a dark Corner. For the Elementary Sun, which beſtows upon the whole World all Light, and all Life, is nothing elſe but the Garment and Covering as it were of the omnipotent God. If then the Garment and Covering be ſo noble, ſo efficacious, and ſo potent, in its Eſſence, how great then is and ever will be the Majeſty of God, that Eternal Light and Center of all Lights? We cannot ſo much as look upon that Garment, *viz.* the Sun without hurting our ſight, nor ſearch out its wonderfull virtues and properties by all our ſpeculations, and as I may ſay, Philoſophations. Why then are Men ſo fooliſh to ſpeak, and think ſo lightly of God, and yet know nothing of him? Hence is it that almoſt every one feigns to himſelf a peculiar God, and worſhippeth and adoreth him, which horrid impiety, the true and onely God abominates. The Ancient Phyſicians attributed the round fiery Sphere that hath its riſe from God, unto the Sun, and figured it out by the ſign of perfection, *viz.* a Circle with a prick in the middle, whereby the Center is deciphered. But ſeeing that in all things, the Center is far more noble and excellent than the circumference it ſelf, which hath its birth from the Center, but the circumference it ſelf doth by ſo much the more differ from the Center, and is more unequal to it, by how much the farther off it is from it: And contrariwiſe, is to be judged ſo much the equaller to it, by how much the nearer it approacheth thereunto: What then ſhall the prick in the Sun be, ſeeing that the Sun it ſelf being but as the circumference to that point, be ſuch a moſt noble and excellent Eſſence? What name ſhall we call that point by? To whom is it lawfull thus to do, (*viz.* to deſcribe that name) in this perverſe World? I even conſtrained, though againſt my will, to forbear farther diſcourſing thereabouts, and to refer it to my Treatiſe of the concentrating of the Heaven and the Earth. But thus much I ſay, that our Terreſtrial Fire which we daily make uſe of, is the firſt degree of that Ladder whereby we aſcend to God, ſo as to comprehend (or lay hold on) this omnipotency, to perceive and ſearch into it, to Love, Fear, Worſhip, and at laſt to ſee and be rendred (through Divine Grace) partaker of the Divine Majeſty: Seeing then that the common Fire and which every body knows is as I will yet again ſay, the firſt degree in that Scale or Ladder, whereby we may aſcend to God and his Myſteries, and yet the property thereof is ſo much unknown unto us: What I pray ſhall we think then of the ſecond and third degree, the which we know nothing of, though we think our ſelves to know ſo much. I do therefore affirm here, and that boldly, that our knowledge is as nothing, and there is not one amongſt many thouſands that knows the ſecond, (much leſs the third) degree. But haply hereafter I ſhall ſpeak and demonſtrate more things of this nature.

A Cordial and Comfortative to be uſed in great and continual Diſeaſes.

TAKE the Flowers of Marjoram, Sage, Roſemary, Mace, two ounces, Nutmegs, Cardamoms, Zedoary, Galangall, one ounce, choſen Cinamon eight ounces, extract the Tincture with Spirit of Wine, then diſſolve in rectified Spirit of Salt, and which is acuated by an addition of Niter, one ounce of Gold: Pour this Solution to the Spirit of Wine, which is impregnated with the Tincture of the ſaid ſimples, and put them to diſtill in a Glaſs Retort in a dry B. There will firſt come over the Aromatical Spirit of Wine, not onely ſweet but withall clear, which when it begins to come white and troubled, take off the Glaſs that you received your Spirit in, and put on another, and draw off all the moiſture in a gentle heat, till there comes out no more Spirit of Wine, and an acid Water of an unpleaſant Taſt follows. Then take out all the Fire from under your Retort, that it may cool. In which (when all is cool) and the Solution taken forth, you ſhall find the Oil of the Spices ſwimming on the top, which is as red as blood and is impregnated with the Tincture of the Gold: The which being ſeparated by a ſeparating Glaſs from the Spirit of the Salt, you muſt add to the Aromatiſed Wine that came firſt over, which will preſently imbibe the ſaid Oil, and be tinged with a moſt curious red. As for the remaining Gold, which the Oil of the Spices hath not attracted to it ſelf, you may precipitate into a tender and bright Calx, and waſh it well with water and add it to the Aromatiſed Spirit, and Oil with a ſufficient quantity of Sugar Candy, that the Spirit may be rendred ſweet and pleaſant. So ſhall you have a moſt efficacious *Aqua Vitæ*, the which doth wonderfully corroborate and refreſh the Sick, in all kinds of weakneſſes. But this precipitation is not to be made like as the common is, in which the Powders that are precipitated do loſe their Metalline form as Gold, which being changed into a yellow Powder is called fulminating Gold, and being put upon a Plate, and heated, gives a noiſe like a Gun, the ſound it gives is very loud, and the blow ſtrikes downwards, ſo that the bigneſs of a ſmall Pea being kindled in a ſilver Spoon will make a little hole. But you are to precipitate the Gold on ſuch wiſe as that it may retain a Metalline form, but ſo tender and fine that it may be well brooked even in the Eyes. Neither muſt all the Gold be precipitated, but onely the moſt noble part, and as it were its Soul, which as to its colour is much fairer and ſublimer than common Gold is. But the more vile part is to be ſeparated by a peculiar precipitation, and to be reduced by fuſion. To this pale part is its former colour to be reſtored by Antimony, ſo that no loſs may be made. If then the former part being precipitated, is better than pure common Gold, the latter part muſt neceſſarily be (being reduced by fuſion) more vile, or thus, if the latter be baſer than common pure Gold, the former ſhall be better than it is, and will therefore be more profitable in Medicine, foraſmuch as it will (being digeſted and conſumed in the Stomach) diſplay its virtues, which the common filed Gold,

Gold, or yet the Leafe Gold will not do. I purpoſely tried this matter, and found the things I tell you of, to be true. But if ſo be as any doubt as yet of this thing, concerning the firſt precipitated Gold as being the beſt part thereof, and which we bid you to add to the Aromatized Spirit, he may melt it down with ſome *Borax*, and compare it with the latter precipitated Gold, and then he will eaſily perceive the wide difference that is betwixt them. The firſt will as to its Colour, far exceed the Gold of the beſt Duckats or Roſe Noble, but the latter will be far worſe. That firſt being again diſſolved and precipitated after a Philoſophical manner, that half of it may again ſettle down, it will become more noble, and again leave behind it a particle of pale Gold. Which operation is verily moſt worthy admiration, by the help whereof, Gold certainly may be at length haply ſo concentrated, as to be able (when reduced to the higheſt nobility, colour, efficacy and vertue) to give colour to the other metals, and amend them. But this is not what I have hitherto, for want of time, tried: But I hope (God permitting me) ſhortly to ſhew ſuch a Gold to the ſtudious of Art, ſeeking after it merely for this cauſe, that I might thereof make an excellent medicine. I will treat more plainly and more fully in my fourth part of the Proſperity of *Germany*, concerning the Artificial and Philoſophical Concentration of Gold and Silver into good Medicaments ; but that I may here give the Lovers of Art ſome ſmall Teſtimony how ſuch a precipitation may be effected, take with you theſe few things. The precipitation may be done as well in the dry as moiſt way, but there the moiſt way is uſed, which is requiſite in the making of this Medicine, but yet it is troubleſome and hazardous, becauſe that ſometimes the glaſſes break, and the Gold falls amongſt the Aſhes. But the dry way and which is void of any danger, belongs not to this place but to the fourth part of the Proſperity of my Countrey. I mention it for this end onely, that it may be ſeen and conſidered, that it is poſſible to make ſome Separation in Gold as well as in the meaner metals. For he that knows how by the benefit of Art to make a Separation in ſome metals of the beſt part from the worſt, hath a profitable amendment of the metal. We teach in the ſecond part of the Proſperity of *Germany*, how the volatile and unripe Minerals, may by Niter be reduced into malleable Metals. In the third part we ſhew the way of turning the common and imperfect Metals into perfect Gold and Silver. Then at laſt in the fourth part we ſhew by what means Gold and Silver may be avanced into more than perfect Bodies and appertaining to medicine; concerning which Separation more ſhall be ſpoken in what next follows. Nor hath any one reaſon to make any Scruple and imagine that I contradict my ſelf, ſeeing that in the aforeſaid medicament I make uſe of precipitation and tender Gold, and yet have openly in many places ſpoken the contrary, *viz.* that corporeal Gold cannot be concocted and digeſted in the Stomach, and this I have moſt often tried. For the Gold which we teach the precipitation of here is much better and more noble than the common Gold, and upon that accompt is not to be accompted of as corporeal, but for the very Kernel, and Soul thereof as it were, which being digeſted in the Stomach of a man, doth produce its vertues into open light. *N. B.* That the ſaid golden *Aq. Vitæ* being to be uſed, you muſt firſt ſhake the glaſs a little wherein it is kept, that ſo the moſt ſubtil Attomes of the Gold may commix themſelves with the *Aq. Vitæ* ; then afterwards ſome few drops of the ſame according as the Perſon and Diſeaſe is, are to be adminiſtred in ſome convenient Vehicle. If you make trial with one or two ſmall drops, you ſhall experience its wonderfull heart ſtrengthening Vertues, and its moſt profitable uſe in all weakneſſes.

Another Metallick Medicament prepared by the help of Nitre, out of a Vein of Lead containing Silver, and moſt profitable in all the Sickneſſes or Diſtempers of the Brain.

TAke a Vein of Lead that is rich in Silver, nor hath either Copper or Iron mixed with it, but by how much the richer it is with Silver, ſo much the better and more beneficial is it for this work. Separate from this Vein all the Sulphureity or Brimſtony ſtinch by Niter, according to the Spagyrical Art, that ſo the moſt pure, moſt ſubtile, and moſt highly Volatile and fluid Mercurial part may remain. Waſh off the Niter as carefully as you can, and ſeparate it, that a bright ſnow coloured heavy Powder may remain. This moſt exceeding fluid and Volatile Powder is the *Mercury* of *Saturn*, 1, 2, 3, 4, 5, even to 12 grains thereof, being adminiſtred in convenient Vehicles, doth exceeding quickly yield help in all grievous affects of the Brain, in the Plague, Pains of Children that are troubled with Worms ; it quencheth all internal heat, and withholds the groſs Vapours from aſcending up into the Brain, it opens all the obſtructions of the Liver, exhilerates the melancholy, reſtores the Lunatick, fooliſh and phantaſtick Ingeny, eſpecially if their Bodies be firſt prepared by my Antimonial *Panacæa*. Nay more, this Cephalick medicament will operate yet better, if after the firſt preparation by Niter it be again waſhed, and made more ſubtil, yea and plainly fixed, that ſo it may exerciſe its vertues and power with the greater efficacy. Laſt of all, it is yet rendered moſt efficacious, if this *Mercury* of *Saturn* be in the laſt Operation driven over in a Retort and ſo converted into a ſweet Milk, demonſtrating the truth of that Philoſophical ſaying, *The Fire and Azoth do waſh the Laton.* Niter is the true Azoth of the Philoſophers, and beſides it, is no other to be found : It is the Scope of the wiſe men, the univerſal Bath of Metals ; The ſaid ſweet Milk may be coagulated, and fixed into a tranſparent and fluid Stone, which again coagulateth and fixeth common purged Mercury. But I have not as yet ſo brought it to ſuch paſs as to undergo *Saturn*'s trial in the Cupel as they call it; yet am I doing it, and hope to bring it to paſs. But although the Stone is yet volatile, yet doth it penetrate the imperfect Metals as *Mars* and *Venus*, and makes them eaſily fluxible and volatile; but ſeeing it does ſo now, what would it do were it reduced to a fixity, this any one may eaſily conjecture what effects it would have. Haply this work is not much different from the work of the little Countreyman. But ſeeing that purification is not different from this matter, we think it worth while briefly to teach, what it is, and in what it conſiſteth: But principally becauſe all my writings tend to this end, *viz.* the ſeparating of the pure from the impure, from which ground have we given this Book its name. Few are they that know the way and manner of Separations, and therefore we deem'd it highly neceſſary to ſpeak ſomewhat thereof in this place:

place. For all the Philoſophers do cry out with one voice, make the fixt volatile, and the volatile fixt. An hard and fixt thing doth by laying down its Earth become fluid and volatile, and this is a Philoſophical ſeparation and operation; after it comes ſublimation and diſtillation, by which a thing is yet again made more pure, being ſeparated from its groſs Fæces. For by how much the oftner any thing is diſtilled or ſublimed, ſo much the purer doth it become, and by how much the purer it is, ſo much the more efficacious and penetrative it is found to be. Now again if the moſt pure part of that thing be brought to ſuch a paſs as that it will reſiſt the moſt violent and all things conſuming forces of the Fire, every one will eaſily conjecture what may be obtained by ſuch like operations as theſe. Theſe things we have ſpoken do ſhew the metallick purification, effected by the benefit of the Spagyrical Art. The ablution of Vegetables, Animals, and Minerals is threefold; The firſt waſhing carries off by the help of Water the adhering impurities, as Sand, Powder, and Earth. The ſecond ſeparates the thin and watery parts from the earthy ones, by diſtillation, and doth the ſame thing as ſublimation is known to do in the ſeparation of Metals. The third ſeparation is performed by the Fire, *viz.* when the ſubject that is to be purified is made red hot in the Fire, that ſo the combuſtible Sulphur being inflamed may be conſumed, the Mercury may go away in fume, and the fixt Earth onely with the Salt ſtay behind, the which is to be underſtood of Vegetables and Animals. The caſe ſtands otherwiſe with the Metals, whoſe three principles are ſo knit by nature with ſo ſtraight and radical a tie, into ſuch an homogenial matter and ſo hard, that they very hardly admit of ſeparation, but do either very ſlowly and by little and little aſcend together by Cohobation, or elſe abide conſtantly together in the bottom. And albeit that ſome black Metal, be either by ſublimation elevated into Flores, or by calcination reduced into white Aſhes, yet after reduction the Metal is found to be as before of the ſame form, and endued with the ſame properties, which it had before calcination, ſo that theſe operations do no ways deſerve the name of Philoſophical Purgations. How many have deceived themſelves, by thinking if they turned *Mars* into a red *Crocus* they ſhould therewithal make *Lune* fixt, not conſidering that that *Crocus* returns by reduction to its own former nature and Iron ſhape. Common *Mercury* is precipitated into a moſt fair and moſt red Powder, and returneth by reduction to its firſt running nature. *Saturn* being calcined by common Salt becomes red Powder, or a *Minium*, which being reduced is the ſame Black-lead as it was before. Hereupon may ſuch an one be deſervedly ſaid to waſh the Black-moor that beſtows his labour on this work. The ſame *Saturn* being waſhed with Vinegar or any other corroſive liquor, gives indeed a white Ceruſe, but it is but a borrowed colour, and he covers his black body over with a white Robe, but yet for all that is preſently diſrobed of the ſame by *Vulcan*: The true Philoſophers do nothing eſteem of this ſophiſtical Purification. *Saturn* is by all the Philoſophers accounted for a black and leprous Gold, for they openly ſay, that there is in *Saturn* what the Philoſophers ſeek: Read but *Paracelſus* his Book of the vexation of the Alchymiſts, and there he mentions more. Nor is it without cauſe that that old Symbol or Proverb is uſed amongſt the Chymiſts. *The Fire and* Azoth *do waſh* Laton. *Azoth* is Niter, and *Laton* ſignifies the matter of the Stone. Some do aſcribe *Laton* to *Saturn*, I will forbear, onely thus much is to be obſerved, that the word *Laton* ſignifies the matter of the Stone, which is to be waſhed by *Azoth* or the *Aceturn* of the Philoſophers that is Niter. Verily I well know that beſides the common *Saturn* and Antimony, there is another, more eaſily waſhed by Niter; but becauſe we here treat of the Vulgar, or the firſt Ens of *Lune*, and the reducing it into a good Medicament by Niter, we will acquiſce in what is already ſpoken, & put off the explication of the ſaid matter to another place.

A Uterine approved Medicament.

FOraſmuch as I have hitherto taught the preparation of ſome notably efficacious Medicines by the help of Niter, and yet have not in the mean while made any mention of the Sickneſſes familiar to the Feminine Sex. I judged it wholly neceſſary to help this weak and infirm Sex (which is appointed for the propagation of mankind) with ſome ſingular Medicament: For (beſides thoſe Diſeaſes whereto the Women are ſubject as well as the Male Sex) they are yet afflicted with many Sickneſſes that do ariſe out of the Matrix, wherewith all as well Maids as married Women, and theſe laſt alſo are troubled not onely before Child-bearing, but afterwards, *viz.* when the Matrix is not well purged after Child-birth, and ſo begets various Sickneſſes, Pains, Winds, Inflammations, Suffocations, the aſcending of evil Vapours unto the Heart, or elſe by obſtruction of the Menſtrues, do cauſe a ſwelling Belly, Weakneſs, Debilitation of the Strength, a ſtraightning of the Heart and Brain, moſt vehement Griefs, and laſtly Death it ſelf: Or elſe the Matrix may be moved out of its place, in Child-birth, its Bonds broken, and the Matrix it ſelf ſo much repleated and debilitated with overmuch moiſture, that it has not ſo much power as to be put and retained firm in its due place, but ſome are conſtrained to leave it hanging out, to their great detriment, and are extreamly tormented with this ſo great a detriment, the Matrix preſently ſlips down out of the Body by either vehemently walking, or any other violent motions, and are neceſſitated always to carry about them a peſſary framed to the intent of keeping the ſaid Matrix up in their bodies, and that to their exceeding great trouble. Now then for the meeting with, and reſiſting theſe aforenamed and other ſuch like diſcommodites, but eſpecially ſuch as are overwhelmed (as it were) with them, I will ſet down the way and manner of ſo doing. As concerning the Matrix and its Diſeaſes which do ariſe after Childbirth, if ſo be that the Matrix be not rightly cleanſed, even the Women themſelves know their own Remedies, and do for that reaſon plant thoſe Herbs that are uſefull thereunto in their own Gardens, or gather them in a fit ſeaſon and ſo keep them by them, till they have need to uſe them in expelling the remains and traſh left after Childbirth: Such as theſe are *Pulegium*, or Penny-royal, Mother-wort, Mug-wort, Savin, and the like Herbs, which have a powerfull expulſive virtue, and there are waters too in the Apothecaries Shops diſtilled to this intent, concerning which it is needleſs to write any more in this place: Thus much onely we would adviſe, that ſuch Herbs and Species as are uſed for ſuch effects, are to be rendred firſt more ſubtile by ſeparating the pure from the impure, that they may afterwards operate more ſpeedily and better. The which thing may be moſt commodiouſly done on ſuch wiſe and manner as I have taught,

and preſcribed in the firſt Part of this *Spagyrical Pharmacopœa* concerning the Eſſences of Herbs. But the obſtructions of the Matrix, and ſtoppage of the *Menſtrues* are not ſo eaſily unlocked by bare Medicaments thus barely taken in, for they penetrate not ſo far with their Vertues, but rather, as experience teacheth, is effected by ſuch Medicaments as are applied beneath, and that more eaſily, and which we have already mentioned in the Second Part of the Furnaces in the Ch of Spirit of Urine, where I have manifeſted a peculiar inſtrument by which ſuch neceſſary Medicaments may be intromitted into the Matrix. I have therewithall hitherto performed many happy Cures. But foraſmuch as I have ſince that time found out a far fitter inſtrument for ſuch diſeaſes, I will clearly deſcribe it for the ſake, comfort, and help, of ſuch Women as are obedient to their Husbands, and chaſtly obſerve the bands of Wedlock, *viz.* both how to prepare and how to apply the ſame. You are to get an Inſtrument made of good Silver (not of Copper) its figure to be round, and like a ſmall Cane, and ſhut in the fore part, and to be a little longer than a man's finger, and about that bigneſs; You are likewiſe to get another a little ſmaller ſo as to go into the other, which other or bigger one muſt have three little edges on its inſide all the length of it, thereby to keep the ſmaller inſtrument about the back of a knifes breadth from each ſide of the bigger one, that ſo it may not touch it. In the hinder part let be a Cover made which may ſhut the Inſtrument tight when the Medicine is put in, leſt the ſpiritual vertue of the ſame fly back out of the body, and ſo order it that it may perform its operation on the Matrix through the Inſtrument, which is to be perforated (towards the top) with holes. To the hinder part of this Inſtrument let a Thread be tied whereby it may be plucked out when its operation is over: Therefore like as the diſeaſe is, ſo ſhall a ſuitable Medicament (and what is made exceeding Spiritual) be applied: On this wiſe let a ſmall piece of fine Sponge be embibed therewithall, and let the inner ſmall Pipe be filled therewith, and be ſo put up to the Matrix. If the *Menſtrues* be obſtructed, then the moſt approved remedy is the concentrated Spirit of Urine, which by its ſubtile, penetrating, warming, mollifying, and opening vertue opens the little Veins of the Matrix, and gives an Exit to the obſtructed *Menſtrue*. But if the Matrix labour not with this diſeaſe, but is onely beſieged as it were with cold and tenacious humours, then the hot and penetrating Oil of Tiles or Wax, rectified moſt ſubtilly, is to be applied, which being ſmeared on ſome Sponge, is to be conveyed in by the Inſtrument into the cold and watry Matrix, the which will thereby be warmed, dried, and freed from the greatneſs of its moiſture. But if ſo be the Matrix ſhall be moved out of its place, or its cords broken, or too much relaxed, or any other way affected, and ſo not be capable of retaining the Matrix, and keeping it from ſliding forth out of the body; Then muſt aſtringent things be uſed, which may conſtringe the too much looſened bands, and may heal and tie the Matrix again in its due place, and ſtrengthen it. Such as theſe are the diſtilled Oils out of mens hair, out of the Wool of Sheep, and ſuch-like Animals, out of the Horns of Goats, Claws of wild Beaſts, and Feathers of wild and ravenous Birds, and ſuch-like things, which being laid upon the Coals, do draw themſelves up together, and do by that contraction ſhew to us as it were their uſe. But the manner of diſtilling and rectifying theſe Oils we have already taught in the Second Part of our Furnaces, ſo that it is plainly needleſs to repeat the ſame in this place. I ſay, and that truely, that if ſo be that theſe three kinds of Medicaments be rightly applied in thoſe three affects of the Matrix, that they will perform things even wonderfull, and many pious Mothers might be preſerved ſound, a longer time amongſt their poor Children, were they but help'd by ſuch remedies. For it cannot be that much help ſhould be brought to the ſick and hurt Matrix by the Potions that are drunk of, or the hyſterial watry Medicines that are injected by a Syringe. For ſuch Medicaments as are taken in at the mouth cannot penetrate with their Vertues home to the Matrix, ſo as to help it, to open, to purge, and to heal it, or to heal the diſſolved and relaxed bands. And as for Waters and Decoctions that are applied beneath, and there injected, they preſently ſlide out again, and do help the Matrix but little, or nothing at all. But now theſe Oils of mine and Spirits are commodiouſly applied by means of the Inſtrument, and diſcharge their office moſt efficaciouſly. But there is yet one thing neceſſary here to adviſe you of, *viz.* that ſuch as deſire to uſe the Spirit of Urine, Oil of Tiles, or Wax, or Oils out of Horns, Hairs, or Feathers, for curing of the ſaid defects of the Matrix, do prepare them themſelves, or commit them to ſuch to prepare them, as are skilled in the Art of diſtillation, and verſed in rectifying ſuch Spirits and Oils, thereby exalting them to the higheſt ſubtilty. For if ſo be that any would buy in ſome Apothecaries ſhop, thoſe things that he knows not how they are prepared, and haply ſuch as are corrupted already, and not fit for uſe, will be groſly miſtaken. For it is not ſufficient (if a thing is to be made uſe of) that it hath a bare name onely, and be deſtitute of the Vertues themſelves, and which are no ways effectual) for the ſaid Sickneſſes of the Matrix are here taught to be cured not with corporeal, but with ſpiritual and efficacious Medicaments. It is therefore neceſſarily requiſite, that the Medicines we have ſpoken of, *viz.* thoſe Oils and Spirits, be excellently well prepared, and ſo as to exerciſe their Vertues by emitting or ejecting their inviſible odour and vigour onely. The Spirit of Urine is to be ſo volatile and very ſubtile, as that it will vaniſh away out of an opened glaſs, and therefore there needs a greater diligence in preſerving and keeping it; It is to be well preſerved in glaſſes cloſe ſtopt, for if the Spirit vaniſheth away, there remains onely an unprofitable Water void of all kind of Vertues. I have therefore taught the making of peculiar Glaſſes, which will not let go the Spirits, the ſhape of them are deſcribed in the Second Part of my Chymical Furnaces, in that place where I treat of the Spirit of Urine. In like manner the ſaid Oils are to be well rectified, and to be made exceedingly volatile, ſo that being expoſed ſome few hours to the warm Air, they will vaniſh away; which if they will not doe, neither will they effect ought. I muſt needs confeſs that all the time in which I have lived, I never found a good Spirit of Urine, nor well rectified Oil of Wax or Tiles. I will ſay nothing of the Spirits of Hairs, Horns, Feathers or Quills (for there's no uſe of them.) I have indeed found amongſt many, a bare worthleſs, ſaltiſh Phlegm, but the very true Spirit of Urine it ſelf I have not met withall. The Oils of Tiles and Wax are indeed found in all Apothecaries ſhops, but are for the moſt part corrupted by their long lying,

and

and are old, thickiſh, red, tenacious, and deprived of their due odour, are ſtinking, and ſpoiled of all their vertues. For 'tis very rare that ſuch Oils are rectified, but are ſold, ſuch as they be, when they come firſt out of the Retort, with a ſaltiſh kind of Acrimony adjoined unto them, which in the rectification abides in the bottom, and is at laſt ſeparated from the Oil. Such Oils are of no value, and appertain not to this curing, for they will do juſt nothing; and thus much I could not omit adviſing you of. For haply when ſome ſick perſon or other readeth here in this my book, that ſuch Oils do moſt highly conduce to expell the ſaid defaults of the Matrix, and yet perceive no comfort or help by the uſe of them, without doubt the fault will be laid on me, as that I had written a lie, and not upon the ill-prepared Oils. This therefore do I affirm, that except your Oils be good, you will never have from them the hoped for event. And how (indeed) ſhall the ſick man know if the Oils be good or not. The Merchant or Seller of them won't confeſs them to be old, ill-prepared, and deprived of their odour. So oft times the fault is laid upon the Authour, and he's condemned for writing unprofitable things, and which are not agreeable to the truth. But the fault verily can light on none ſave upon the Magiſtrates, who (by winking at ſuch things) do permit it. And when any one goes to be furniſhed with theſe things which are requiſite, in ſome Apothecaries ſhop, and the Apothecary haply ſells but few Wares, and all the reſt wax old as they lie, and are corrupted; and if haply ſometimes one or two ſuch and ſuch Simples or Medicaments be ſought for but once or twice, it may be, in a whole year, he delivers the things he has by him, which if helpleſs as to the ſick buyer, yet are helpfull to the Apothecaries purſe. But yet this is an unjuſt thing, and a thing contrary to the love that is due unto our Neighbour, and what will burthen the Conſcience. The ſick man thirſting for help, puts the hope of his help and comfort in the Medicine exhibited him, which if not good the diſeaſe prevailing, the ſick man dyes, but had good and profitable Medicaments been uſed, inſtead of the unprofitable and evil ones, he might have recovered. He therefore that is guilty of ſuch evils, let him look to it, what account he will at laſt give unto God for his tranſgreſſion; That which I have aforeſaid, doe I again repeat, and do yet firmly alledge, that the beforementioned Spirit of Urine, as likewiſe the Oils of Tiles and Wax, and thoſe other Oils of Horns, Hairs, and Feathers, and their moſt efficacious Spirits may be made uſe of in the expulſion of the affects of the Matrix of what kind ſoever, both in the younger Maids or Women, and in thoſe that are of riper years, and that with moſt high admiration. It is therefore a juſt and right thing that they ſhould be found in all the Apothecaries ſhops, and that they ſhould all of them be prepared after a due manner. For they are not onely good in thoſe diſeaſes that afflict the Womb, but do likewiſe operate miraculouſly and doe things incredible in many other diſeaſes and affects of the Body if well and rightly prepared and duely adminiſtred inwardly and outwardly; Concerning which we have written more at large in the Second Part of the Furnaces, *viz.* how they are to be prepared and made uſe of. Any one that is endued with underſtanding will perceive eaſily that a living Spirit is far more efficacious than a dead Body and exanimated Carkaſs. Foraſmuch therefore as you have here heard that ſuch grievous and incurable (ſo accounted at leaſt by almoſt all Men) diſeaſes of the Matrix, by which ſo many Women are ſwept away without any help, are to be cured by the alone application of ſubtile Spirits, and ſo few know the preparation of them, I will teach for the ſake of that weaker Sex a better and more effectual Medicine, and withall will prove it by an example, that all ſubtile Spagyrical Spirits may be concentrated and augmented in their Vertues by the help of Art, and that one Spirit hath the power of concentrating another. And becauſe this Treatiſe, and all the Medicaments therein propoſed, aim onely at this end, to ſhew the wonderfull Vertues of Niter; And it hath been beſides ſhown, how all the ſaid Medicaments ought, by the help thereof, to be prepared; the ſame ſhall likewiſe be done in the demonſtration of this Medicine.

I taught in the Second Part of my Furnaces to prepare a Spirit of Urine and *Sal Armoniack* by the addition of Calcined Tartar; But yet the already concentrated Urine or *Sal Armoniack* may be mixed with double the quantity as its own weight is, of fixed Niter, and ſo be diſtilled, for ſo thoſe Spirits will be more ſtrong and more efficacious than if Tartar were added unto them. And if the Oil of Tiles or of Wax, which is made by the addition of Earth, ſo heated as to imbibe the Oil or Wax, be yet once more diſtilled by the concentrated Spirit of Niter, it will be brought to the higheſt ſubtilty, and 'tis to be done after this following manner.

Diſſolve in one pound of the Spirit of Niter, four ounces of *Lapis Calaminaris*: Put the Solution in a Glaſs-Viol upon a vaporous or dry B, that the Phlegm may evaporate by little and little (for the *Lapis Calaminaris* holds all the Spirits, and permits the Phlegm to go off) and the Spirit of Niter will remain behind in the Viol-like Oil. Take one part of this concentrated Spirit of Niter, and half a part of Oil of Tiles or Wax, put them both in a glaſs Retort well luted, and force them out (by a diſtillation in Sand) from the concentrated Spirit into a great Receiver; and by this operation it will be far more penetrative than it was before. For the Spirit of Niter being by concentration by the *Calaminaris* freed from all its Phlegm, and ſeeing it is thereby become the more attractive, and can find nothing elſe that it might attract, it aſſociates to its ſelf all the humidity that lies hidden in the Oil, and which could not be ſeparated by the former diſtillation, and hereby brings to paſs that the Oil doth neceſſarily become more ſubtile and efficacious, yea ſo penetrative, as that it performeth wonderfull things, eſpecially in the effects of the Matrix, the which nought but very ſubtile Spirits can heal, and which thoſe concentrated Spirits are wont to do far more certainly and ſecurely than all the other Medicaments in the whole world: After the ſame manner is the concentration and purification of the other Oils to be performed. And now that none might ſcruple as to Waters being mixed with the ſaid Oil or Wax, which have no affinity with Water, the ſeparation of which from the Oils, I have here taught; I would have ſuch an one to know, that much fatneſs, as the expreſſed Oils of Vegetables are never without an aqueous moiſture, though it be inviſible, and cannot be perceived. For the fire can make it manifeſt by diſtillation: As for inſtance; There's Oil-olive, one pound of which is wont to yield ſix or ſeven Lots of Acid Water by diſtillation; and thus do all Oils, Wax, Turpentine, Roſin, Gums, Pitch,

Pitch, Amber, and all combuſtible fatneſſes. Yea even the very burning Spirit of Wine it ſelf, and ſuch others as are prepared of Vegetables, can never be throughly rid of their Phlegm, unleſs they be poured on ſome Calcined Salt, and ſo rectified, they leave their humidity therein, and become more ſubtile. But this is to be noted, that by how much the drier and more attractive that Salt ſhall be, ſo much the readier will it attract the moiſture out of the winy Spirit and hold it. Therefore the Salts of Vegetables, Calcined Tartar, and principally fixed Niter, ſerve for ſuch a rectification. The other Corroſive Salts, as fixt *Sal Armoniack*, Calcined Vitriol, and ſuch like, do rather love to hold and retain the Phlegm of their own peculiar Volatile Spirit than of the Spirit of Wine. And thus much let ſuffice as to making ſubtile Oils more ſubtile, that they may perform wonderfull things in Medicine. And now having deſcribed in this my Second Part of the *Spagyrical Pharmacopœa*, ſome of the moſt neceſſary Medicaments, that are preparable by Niter, and have ſhewed the way of uſing them, and which may ſafely be given in chief diſeaſes as well for preſervation as cure: I could to theſe add many more, and ſo encreaſe the number of them. But becauſe there are not a few of ſuch good kind of Medicaments in the writing I have hitherto publiſhed, *viz.* in the firſt, ſecond, third, fourth, and fifth Part of the Furnaces, in the *Miraculum Mundi*, and in the Mineral-Book, and there ſhall yet follow more in the following third Part in this *Pharmacopœa Spagyrica*, in the Vegetable work, as alſo in the ſecond, third, and fourth Parts of the Proſperity of my Country, I judged it needleſs any longer to dwell on theſe here, but will onely by way of concluſion, and for (as it were) ornaments ſake, yet add one onely Medicament of Niter, which will be none of the meaneſt. But foraſmuch as this is not a common preparation, but comprehends in it great Myſteries, it ſeems not good unto me to ſet down its preparation before the eyes of the perverſe world. Let it therefore ſuffice to give onely ſome hint, that the Common Niter, which to our Eyes appears moſt white, doth contain in it a Soul of a deep red Colour, which by the benefit of the Vulcanick Art may be thence educed. For when *Vulcan* hath reduced that old Dragon, bound in Chains, unto a moſt high ſtreight by his Iron and fiery Mallet, and yet cannot plainly kill him; *Neptune* coming in to help, meets the Baſilisk with a clear Looking-glaſs, and turns on him his own peculiar poiſon, and ſo ſlays him. As ſoon as he begins to die, and ceaſeth to vomit forth fire, *Neptune* laying aſide all fear, approacheth boldly near him, and puts a Sheeps-skin over his Jaws, and receives his Bloud and Soul, and precipitates it into the Salt-ſea, wherein being drowned and choaked, he lays off all his venome and all his filth, and is converted into a moſt fair and moſt red Medicine. One onely drop of this Soul of Niter can tinge an ordinary glaſs full of Common water with a golden Colour. But he that can turn this Bloud of the Dragon by the help of fire into a fire-reſiſting Salamander, he may deſervedly be compared with the happy *Jaſon*, and obtain moſt great Honours, Treaſures, and Riches. From all theſe things may a ſtudious Artiſt eaſily ſee what Myſteries lie hid in Niter. The things which I have hitherto deſcribed are onely as it were ſmall ſparklings of thoſe kinds of Myſteries that lie hidden in Niter. There ſhall be deſcribed in the fourth Part of the Proſperity of my Country, and in the following third Treatiſe of this *Spagyrical Pharmacopœa* more and eminenter Metallick Medicines, and which are preparable by Niter: and this is done to the intent, that every one may know, how wonderfull and excellent a ſubject Niter is, the which is notably hidden by the Antients, and never wont to be called by its true name, but by Enigmatical Riddles. From hence has ſprung up even infinite names, as, a dry water, a water not wetting the hands, an Hermaphroditical *Mercury*, a *Balneum Regium*, the Soap of the Wiſe men, the flying Dragon, the Urine of Boys, a Dunghill, Azoth, the waſher of Laton, a moſt ſharp Vinegar, the Stygian-water, the Death of the Living, the Life of the Dead, the Purgatory of the imperfect Bodies, the Baſilisk, the forked Serpent, the moſt great Venome, the Venome of Herbs, the *Menſtrue* of Women, and ſuch like infinite names, whereby they have wrapped over its true hidden name in Cimmerian darkneſſes, but is now by me revealed, and is ſet before the eyes of the whole world, and it ſhall farther be revealed and detected in the three remaining Treatiſes of the Proſperity of *Germany*, which ſhall very ſhortly follow, and ſo its wonderfull power and moſt efficacious vertues, which it performeth in the bettering of Metals, and in preparing Metalline Medicaments may be manifeſted and laid open before the whole world. I will not onely declare this in writing, but alſo will (God permitting) very ſhortly ſhew, even manually and in very deed in a convenient Laboratory, the making and uſe of all my Furnaces, hitherto publiſhed in my writings, and the preparation of many excellent Medicines, as alſo the truth of the metalick Tranſmutation. Nor will I do thus to the end that I may advance my own profit, but will rather do it for this intent, *viz.* that the health and ſafety of many thouſands may be provided for that are afflicted with various ſickneſſes, and that the whole World may ſee, believe and confeſs, that the Tranſmutation of Metals by the abject Niter may be effected. But becauſe in ſuch a like demonſtration, if the Laboratory be frequented but for one years ſpace onely, and daily laboured in, and the confecting of ſo many Medicaments be ſhown, ſuch a great quantity of various Medicaments as I ſhall have by me, cannot be all uſed by my ſelf, nor can they be of any uſe if laid up, and therefore they ſhall be ſold to any one for a ſmall and vile price, that ſo they may each that needs them uſe them in their neceſſity. It is not Covetouſneſs that driveth us thus to doe, thinking thereby to get great riches, but onely to get juſt as much as may ſerve to pay for all the neceſſary matters, as Coals, Glaſſes, and other things. So then by this ſo good and laudable a work, there will not onely be laid open to the whole world, the occult Myſteries of Nature, to the honour of God: But withall, the moſt miſerable poor Sick will eaſily obtain good Medicaments, and recover their former health. Nay farther, not a few of ſuch as have been in want will be able by the moſt profitable uſe of Niter in tranſmuting the inferiour Metals into better, be able to ſuſtain themſelves better and more quietly. But that the whole world may ſee and conſider that my own peculiar profit and gain is not ſought, but that my Neighbours profit is out of a Chriſtian affection onely aimed at, there ſhall be adjoined at the end of the following third Part, the price of every Medicament; from whence every one may eaſily conjecture, that there is not expected any gain or large profit, but onely the recovering

recovering of my disburſements; ſeeing no one is to be found who, beſtowing great coſts in teaching others, would willingly loſe both his Expences and Labour too. I will with a willing mind teach others, but I will not lay out my Money and run the hazard. The World is wiſe enough, and great is the number of thoſe ſick people that need help: And therefore this publick Laboratory will (by God's help) be able to bring abundance of profit to all mankind; In this Laboratory there ſhall be all the Furnaces and all the Inſtruments whereof I have made mention in the Writings by me publiſhed, but the reſemblances of them not pictured, becauſe there's no occaſion for that to be added; And withall, thoſe Furnaces, Preſſes, and Inſtruments which we have mentioned or ſhall mention in the firſt, ſecond, third, and fourth Part of the Proſperity of my Country, and in the Vegetable work, and my other Writings ſhall be there to be ſeen, the which certainly will be exceedingly helpfull to moſt men that abhor not to labour, to procure them food and ſuſtenance in their neceſſity.

Furthermore, foraſmuch as all my Writings hitherto publiſhed, are very negligently and faultily printed here and there by other men, againſt my knowledge. I will again ſend them forth corrected, amended, adorned, and encreaſed with the figures hitherto omitted. And this I was unwilling to conceal from the Lovers and Students of Arts. Herewithall will I conclude this Second Part of my *Spagyrical Diſpenſatory*, and ſhortly add the Third Part, onely wiſhing that this Work of mine may ſerve for the comfort and aſſiſtance of very many ſick perſons. *Amen.*

The End of the Second Part.

THE THIRD PART OF THE Spagyrical Pharmacopœa.

Wherein is taught, how by Salt and Fire, the Vegetables, Animals and Minerals may by a *Spagyrical* way and method be Mundified, and how from them, Medicaments wonderfully penetrating and moſt ſpeedily operating may be prepared.

AS for the manner of reducing Vegetables, Animals, and Minerals, by Diſtillation into good and pure Medicaments, by the help of the Spirits of Salt, thus ſtands the caſe: The manner and way of diſtilling Vegetables, Animals, or Minerals *per ſe*, after the common manner or way into Oil, Spirit, and Volatile Salt either in a B. Sand, or naked Fire, which hath been long ago, and alſo is at this day in much uſe, I cannot in all reſpects commend, becauſe that ſuch Spirits, Oils, and Volatile Salts, (whether from Animals, or Vegetables) do all of them ſtink, and though they be often rectified, yet do they not totally loſe that innate ſtink gotten in their Diſtillation, but do always retain a kind of an ungratefull *Empireum*, and are thereby loathſome to the Sick (and that not without cauſe too) whereas otherwiſe they have abundance of virtues; but being rectified with Spirit of Salt (as I have taught in the ſecond Part of my Furnaces) they become pure, and loſing their ſtinch are gratefull and acceptable, but not at all ſo without that rectification. Now all Men know, eſpecially the Spagyriſts, that the chief virtues of Vegetables and Animals are placed in their Oils and Volatile Salts, (for you muſt note that in Minerals the contrary is found, for their mercurial parts are moſt virtuous) but both Oil and Salt do in diſtilling by a Retort paſs over aduſt or burnt, and therefore are not made uſe of, and (the more's the pity) are ſerviceable to none. For all ſuch as diſtill the Oils of Vegetables, by the appoſition of common water, in Copper Stills, do know how very little a Portion is obtained by ſuch a proceſs, and that the greateſt part of them (Oils) do abide in the Still, and are of no profit, becauſe common water can't be made hot enough, to drive out the fatneſs, but it gives onely ſome little portion, the reſidue is made thick and tenacious by the boiling, and remaineth in the Herbs: Hereupon ſome

Men knowing this thing, do add to the Herbs common Salt, and Tartar of Wine, whereby the water being rendred one degree hotter, gives more Oil: This is a way that I do indeed approve of, but yet the one half part of the Oil will not aſcend, and therefore diſtilled Oils are commonly very dear, eſpecially if made out of dear things. Whereas if the Oils were diſtilled by this method of mine, they would have much more Oil, whereby the poor might alſo buy them. I will inſtance in one ſimilitude whereby it ſhall appear, what great profit may be made by diſtilling of Oils according to my method, and what a vaſt difference there is betwixt my method here deſcribed, and the common uſual way. Suppoſe therefore that I ſeek after an excellent Medicine for the Stone, and that I do certainly know that it lies in the Aſh, (as I have clearly enough diſcovered in the firſt and ſecond part of this *Spagyrical Pharmacopœa*, certainly knowing, that the Oil diſtilled out of its Seed doth (by manifold experience) far exceed all other Medicaments againſt the Stone.) This Aſh indeed yields a prety quantity of Seed, but much of that Seed yields but very little Oil, becauſe 'tis reſinous, and doth not diſtill over with the water, and upon that account is prepared but by a few, and ſuch poor Men as are ſick, can't partake of it becauſe of its dearneſs, and this is much to be bewailed, that the Omnipotent God ſhould ſet before our Eyes this Medicine in ſuch plenty and yet no body enioy it. Beſides this is to be obſerved, that if ſome diligent Phyſician ſhould diſtill ſuch an Oil, and yet not know how to correct it according to my method, he may ſometimes do more hurt than good, becauſe that Oil brings over with it a certain volatile Salt, which (infects or works on) the Copper Veſſel it is diſtilled in, and the Copper refrigeratory which it paſſeth through, and is uſually thereby rendred yellowiſh, or green, and hath been by many diſcreet Men made uſe of without any regard thereunto, and (by reaſon of the Copper) hath put a nauſeate and debility of Stomach upon the Sick, and hath been more hurtfull than beneficial. But now if they had rectified it with Spirit of Salt once, or at leaſt well ſhook it in a Glaſs with the ſaid Salt Spirit, that ſo the Copper might have been extracted by the Spirit of Salt, and ſo have adminiſtred it, they had done well, and would have gotten a moſt excellent Medicine, though I confeſs ſomewhat dear, (proceeding this way) becauſe that a Sackfull of the Seed, and as much as a Porter can carry at once, will ſcarce give two ounces of Oil, and this is too dear for the Poor Man's Purſe.

For the ſake therefore of all ſick People as well Poor as Rich, I will diſcover my way that I uſe in getting the Oils, Spirits, and Volatile Salts out of all the Vegetables, and that in good quantity, and with very ſmall Coſts, that ſo all Men may partake of the gifts of God, and may all have occaſion of giving thanks to the Creator of all good things.

Take therefore in Gods name whatſoever Vegetable you liſt, and fill a great Glaſs Retort therewithall, and by degrees diſtill over all that will come. Separate the Oil from the Spirit, and the Spirit by rectification from the Volatile Salt; rectifie alſo this Volatile Salt, and the Spirit upon its own *Caput Mort.* or upon ſome other Salt of Aſhes being firſt fired and calcined, and ſo they will become pure and loſe that fetid ſtinch that they got in the Diſtillation: If one rectification is not enough, add a ſecond or a third, always provided that it be done on the fixed Salt of that Herb out of which you drew the Spirit. Now though the Oil be alſo depurated by a rectification upon the *Caput Mort.* yet that depuration and rectification is not comparable to this of mine which I mention here, and therefore well do we prefer this way, and 'tis thus.

Take your black diſtilled Oil, put it in a Glaſs Retort with ſix or ſeven times as much rectified Spirit of Salt, and give firſt a gentle Fire, then a greater as the thing requires, ſo the Oil will paſs over pure with the Spirit of Salt, and the ſtinch together with the blackneſs, will ſtay behind with a part of the Spirit of Salt. If now you will have that Oil yet purer, then rectifie it again with new Spirit of Salt untill both the Odour and Colour thereof pleaſe you. As for the Oil that ſtayed behind and did not aſcend, ſeparate it from the Spirit of Salt, and 'twill be ſomewhat thickiſh like to a black Balſam, and hath great virtue both inwardly and outwardly, but its inward uſe we need not, for we have enough of the pure Oil for that purpoſe. But that I may be yet farther ſerviceable to my Neighbour, and that he may underſtand me more thereby, I will make uſe of this ſimilitude or example. Put caſe, that I have ſome four, five, or ſix pounds of the Seed of the Aſh, which falls from the Trees in the Month of *September* or *October*, I do fill a Retort with the ſame and by it diſtill the ſaid Seeds, and I uſually have about one or two, ſometimes three, four, five, or ſix drams of black Oil, ſome ounces of Volatile Salt, and ſome pounds of Acid Spirit: Now foraſmuch as I ſeek for the Oil onely, I ſeparate this from the Spirit, and rectifie it with Spirit of Salt untill it becomes pure, and this I keep for my uſe; and I make of the Spirit either a certain Eſſence, as I have taught in the firſt part of my *Pharmacopœa*, or ſugered Tablets, (or Lozenges) or what I pleaſe: And by this way do I get more Oil out of five or ſix pound of the Seed of the Trees, than otherwiſe by the *Veſica* or common hot Still, out of 100 pound, and that which remaineth after rectifying is profitable for external uſes, if it be prepared as follows, *viz.* Separate this thick Oil from the Spirit of Salt and mix it with Wax, that ſo it may be made ſomewhat thicker, ſo as to be ſpread like an Emplaiſter, the which put upon the Reins, and uſe the diſtilled Oil inwardly, and thus this Emplaiſter will perform as much outwardly as the diſtilled Oil operates inwardly, and ſo the Patient is thereby doubly repaired and helped. And if you deſire yet a third way of healing, then rectifie the acid Spirit well, and diſſolve the Volatile Salt by ſubliming it with the Spirit, and uſe this Spirit every day (beſides the inward uſe of the diſtilled Oil) on this wiſe: Heat it a little, and dip in it ſome Linnen Cloaths and therewith waſh or bath the Back and Reins putting on the Emplaiſter afterwards, and hereby the Sick Perſon will in a ſhort time (unleſs God doth in a ſingular manner put a ſtop thereto) certainly recover.

Note well, after this manner may you diſtill all other Vegetables into Oils, Spirits, and Emplaiſters, and make uſe of them in this Diſeaſe, ſuch as are Saxifrage, Parſly, Cumin, Carraways, and ſuch like other Herbs and Roots: Neither is it always neceſſary to have the Aſh Seed, unleſs you pleaſe: For that this Tree is not to be had in all places, and it yields alſo at ſome Seaſons but little Seed? *N. B.* Here ſome may demand and ſay, you have taught us the manner of preparing Oils, Spirits, and Balſams out of the Seeds, but now if ſuch a Medicine could

could be made out of the Herbs it would be ſomething, for whence ſhall ſo much Seed be had? I Anſwer. If thou haſt not ſo much Seed, thou may'ſt make the Medicine out of the whole Plant, as the Root, Stalk, Flowers, and Leaves: And the reaſon why I mentioned onely Seed, was this, becauſe the chief virtue of all the Vegetables, is occultly placed and concentrated in the Seed, elſe the whole Plant may (as aforeſaid) be made uſe of, which although it yield not ſo much Oil as the Seed does, yet may we even this way receive a good quantity: And if we ſhould neither take Seed, Herb, Leaves, or Stalks, yet would the Root alone afford much Oil; but in Trees, as in Aſh, Linden, Nut, Cherry, Peach, and the like, the very bare Wood it ſelf will abundantly ſupply, if diſtilled *per deſcenſum*, or by a Fire of ſuppreſſion (of which afore,) ſo that a little Aſh if rightly handled may afford you ſome pounds.

Nor are you to ſuppoſe that this way of plentifully preparing the Oils of Vegetables and clarifying them by Spirit of Salt, ſerves onely for ſuch Vegetables as are good againſt the Stone, becauſe I have onely inſtanced them as examples; No, but even all Vegetables, ſerving for every Diſeaſe, may be by this aforeſhown way reduced into moſt ſweet Medicaments. Nay not onely Vegetables may, but alſo Animals and Minerals too, but with ſome difference and diſtinction, which we ſhall mention in what follows.

There remains yet one thing more to be mentioned about the Oils of Vegetables, and the Diſtillation of them, and 'tis this. Some or other may reply and ſay, that haply ſuch Oils as are prepared firſt by a Retort and *per deſcenſum*, and then rectified and clarified by Spirit of Salt, are not equivalent in their virtues to thoſe which are diſtilled in a Copper by the help of Water. For prevention of this Quæry, and the removal of ſuch needleſs cares, we do in the firſt place demand, in what the virtues of the Animals and Vegetables do conſiſt, whether or no in their connate and occult property, or in the Odour, Savour, and Taſt. For anſwer, the greateſt virtue of moſt Herbs, and living Creatures doth for the moſt and greateſt part conſiſt in their Co-nate or Co-born nature and property, and not in the Odour or Savour, as is ſufficiently evident in ſome Plants, which have ſcarce any Odour or Savour, and yet are found notably efficacious in Medicine, and ſome there are both of a ſweet Odour and Savour, which have no Medicinal uſe, and ſome that have an ungratefull Odour and Savour, and yet have no mean Medicinal Virtues. And many there be of things which both ſmell and taſt ſweet, and are alſo profitable in medicine, becauſe God hath created them ſo or to that intent. I muſt needs confeſs that ſometimes an Odour or Savour of ſuch an Herb as hath but little virtue is notably refreſhing and comfortable to the Vital Spirit, nay more, the very ſeeing of a fair and comely thing is capable of comforting the Heart, and an ugly thing of debilitating it; a notable example hereof we have in a friendly man, and in Gold, as being things which by the very beholding of them do refreſh the Heart, whereas contrariwiſe, an angry man, and a venemous Creature do terrifie it, (*viz.* the Heart) and as 'twere make it Sick, yea and ſometimes kill outright. Beſides, not onely the ſeeing of ſuch and ſuch objects do profit or hurt, but even the very voice of a man, or of a living Creature do hurt, weaken, and kill, if proceeding from a malignity. Farther, the bare imagination can effect good or evil, heal or hurt; but this belongs not to this place, but ſuch things are treated of in my ſhort Treatiſe of things natural and ſupernatural. That which I have here ſpoken is to this end, that the unskilfull might know, that the virtues of Vegetables do conſiſt more in their Co-born Nature than in the Savour or Odour, and that this Diſtillation by a Retort, and rectification by Spirit of Salt, can neither add to or diminiſh from their virtues, becauſe their virtue remains always unhurt, in what manner ſoever the Diſtillation be made, provided that that which is diſtilled be diligently depurated, and all the ungratefulneſs removed therefrom which it got in the operation, that is to ſay, when Oils are aduſt (or Savour of burning) by their being diſtilled in a Retort, then that accident may be taken away from them by rectification with Spirit of Salt, and this now I add for the ſake of the Ignorant.

Moreover as it is with Vegetables, ſo likewiſe muſt you order your diſtillation of the Oil, Salt, and Spirit of Animals: Neither need you to proceed farther or otherwiſe. As for the Vertues of both Animals and Vegetables, the Phyſician ought to know them by their Signature, and not by the books of Writers, becauſe the Signature doth ſhew us the Vertues of all things much clearer and righter than many Writers, who write many things meerly from hear-ſay, whenas themſelves do in truth know very little or nothing at all. And thus for this time I omit to ſay any more, for that the preſent occaſion will not admit of a more prolix diſcourſe hereabouts. What I have done is for the Sick that are poor, that they might know my method of purifying the Spirits of the Acid Salts from Vegetables or Animals, by Spirit of Salt, and of bringing them into wholſome Medicaments: And this cannot be accompliſhed ſo plentifully without this Medium; and now this way being ſhown, the Poor may alſo enjoy the benefit of them, and be able to pay the Apothecary, whenas before even the Rich could hardly have any of the good (in them) Note well, you are yet farther to obſerve, that indeed the Animals are firſt to be diſtilled by a Retort (as we ſpake before concerning the Vegetables) that ſo their Oil, Spirit, and Volatile Salt, may paſs over together; and their Spirit and Volatile Salt may be rectified and purified the aforeſaid way. But the Oil will not come over by a bare Spirit of Common Salt, or of Niter, but that Spirit muſt be firſt concentrated with *Calaminaris*, and then it brings over the Oils of Animals, elſe not. But as touching the Concentration of the Acid Spirit for this rectification, we ſhall ſpeak of it anon, and will therefore firſt ſet down (for better inſtructions ſake) one certain proceſs of diſtillation and rectification, leſt any might err, and that all might rightly apprehend my meaning; and 'tis this: Take ſome pounds of Turpentine, diſtill thence an Oil, and the Fæces of the Turpentine will ſtay behind. This Oil though it be rendred by Diſtillation purer than 'twas before, yet it hath put on another nature by means of the Fire, *viz.* an hotter nature, and therefore ſerveth not for every effect which the Turpentine before ſerved for, becauſe the Turpentine is not very thick nor very thin, nor too hot or too cold, nor too ſubtile or too thick or groſs, but is of a temperate eſſence and property, which now by Diſtillation it poſſeſſeth no longer, but becauſe of its heat and ſubtilty, it is unuſefull. Well, what of all this? Why ſome or other might have objected to me

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that indeed things are by diſtillation rendred more pure and ſubtile, but doe thereby get an hotter nature and vertue, and therefore that way of purifying doth not doe well in all ſubjects. Well, to prevent this objection, and that the diſtilled Oils may after their purification be reſtored to the ſame degree of thickneſs, rarity or thinneſs, colour or frigidity, that they had before, and yet retain the purity they got by diſtilling: the method is eaſie, and is thus done. Suppoſe that Turpentine be (as it is Turpentine) hot and ſubtile in the firſt degree, but being diſtilled it arrives to the third degree, and being rectified to the fourth. I muſt now needs confeſs that that ſubtile Oil is to be uſed onely in cold affects, and in no others, whereas it might before have been employed about other accidents. To this I ſay, and yield, that if it be proceeded with after the common and known way, 'tis ſo: But my way is far otherwiſe to be reckoned of: For though hereby the things diſtilled doe, together with a purity, get a ſubtile heat, and doe in ſome operations become too thin and hot, yet in rectifying by the Acid Spirit, ſuch qualities are broken, divided and diſſipated, ſo that it is in part rendered of a like thickneſs and tenacity as it was at firſt, and a part of it remains ſubtile. So that you may have out of one ſubject, both thin, hot, thick and temperate parts together, but both of thoſe parts pure, as ſhall be evinced by this Example.

The Spirit of Salt, or of Niter is indeed inwardly a mere Fire, but externally a mere Cold, by which all thin things do ſtiffen and wax hard. Therefore as the diſtillation doth induce heat, expels and extenuates, ſo the rectification doth by the acid Spirit compel or drive the ſame inward, thickneth it, and reduceth it into an equal temperature: For the Oil in the firſt diſtillation is plainly hotter and ſubtiller both within and without, than 'twas before, but by rectifying it with the acid Spirit, the moſt ſubtil part comes over firſt, then the middle part, and the thickeſt reſides in the bottom, which is of an equal degree of heat and thickneſs as the Turpentine is, and is as uſefull both inwardly and outwardly as the Turpentine it ſelf is. And I have over and above that middle Oil, and that moſt ſubtil Spirit burning and penetrative, the which I can make uſe of for thoſe effects, which require ſuch ſubtilty, or if I liſt, thicken it with what I left remaining of it ſelf behind, which is thick, but yet purified, or elſe thicken it with ſome other convenient thing. And thus may I reduce one Subject into as many Degrees as I pleaſe, whereas the Turpentine had before but onely one Degree: From hence may the friendly Reader ſee what *Baſis* this my diſtillation and rectification by an acid Spirit hath: Whereby not onely a great deal, yea 3, 4, or 5 times more Oil comes over than by the common hot Still; but alſo the Volatile Salts and the Spirits, and ſharp Vinegars may be hereby gotten out of Vegetables and Animals, and beſides a pretty quantity of thick Oil to be externally uſed, and which otherwiſe in diſtillation by water in a *Veſica* or hot Still, would remain wholly behind. The benefit therefore of this diſtillation and rectification, doth not onely conſiſt in the getting a far greater quantity of the pure Oil, but alſo in getting the Volatile Salt, (which as to its uſe is equivalent in vertue to the Oil) and withal, an acid Spirit which abundantly ſufficeth both inwardly and outwardly according to its Office. I do therefore earneſtly demand of all skilfull Spagyriſts (for 'tis in vain to appeal to ſuch as are yet ignorant what the Art of Fire is) whether or no this diſtillation is not to be preferred before the others, and to be made uſe of for the benefit of mankind. I hope that the well minded Reader will follow this rule, and will apprehend from this one proceſs onely, ſo much as to be afterwards eaſily able to reduce every diſtilled Oil into its former hardneſs, by the help of an acid Spirit. Let us conſider Amber onely, 'tis indeed a fine tranſparent kind of ſtone, which was before (or at firſt) ſoft and fluid as Turpentine was, an Oil or a kind of thin Bitumen, but now ſo hardened by the ſalt Water that it may be beaten to a Powder, yet may it be diſtilled and ſo ſeparated and cleanſed from its earthly Nature: And the pure Oil may be reduced into its former hardneſs, by the help of Spirit of Salt onely: For it became at firſt hardened by Salt, when it flowed thin out of the Rock: But of this enough, we ſhall ſay more of it in another place.

Now follows the Proceſs of purifying Minerals by diſtillation or ſublimation, and of depurating them even to the utmoſt, by rectifying them by an Acid Spirit. To exemplifie which, I will inſtance in Common Sulphur, according to which rule the other purification of Minerals may be inſtituted.

Take common Brimſtone, ſublime it the uſual way into Flowers, or by it ſelf in a Coated glaſs retort, or let it be mixt with decrepitated Salt, for ſo will it be freed from its moſt crude terreſtreity, and be rendered fit for a farther Mundification by an Acid Spirit. Take one pound of theſe Flowers of Sulphur, and put it into a ſtrong Glaſs Body coated, then pour in one or two pounds of the Spirit of Niter, or of common Salt, and place it in an Earthen-veſſel in Sand: Put there under a Fire, encreaſing it gradually untill the Spirit of Salt boils in the Retort, and the Sulphur melts, and there will ſwim ſomewhat like Oil on the top of the Water: *N. B.* An Alembick is to be put on the Body, leſt the Spirit of Salt aſcending up, goes away in fume; but in the Alembick it will be refrigerated, condenſed, and may be ſaved. This boiling is finiſhed in ſome five or ſix hours, and ſo the Sulphur is mundified, and becomes as clear and tranſparent as Glaſs. For the Spirit of Salt attracteth the Metalline Parts, which are in the Sulphur, whether it be Copper, Arſenick, Auripigment, Vitriol, or ſuch-like impurities which are commonly adherent, and ſtickers on to the Sulphur, and would otherwiſe have remained in it, and done more hurt in Medicine: And this *Paracelſus* knew, and adviſeth to beware of; For certain it is there lye hidden in Sulphur incredible Vertues, and ſuch as its common Flowers do not ſhew or diſcover, as being yet infected with Mineral venenate Spirits, which may be taken thencefrom by the *S*pirit of Salt. And if then either the Flowers be ſublimed out of it, or that it be diſſolved in a Balneum with Spirit of Juniper, or of Turpentine, or be by any other way reduced into a Liquid form, it doth much good in Medicine, nor is there any more fear of its venomous nature, for the Spirit of Salt hath took that away. I could indeed here mention ſome preparations of Common Sulphur, into efficacious Medicaments, but that I have intended to proceed no farther with it here, than onely as touching its purification by the Spirit of Salt: the reſt we will leave to another time.

As Sulphur may be proceeded with, ſo likewiſe may you deal with the other Minerals, and firſt mundifie them by a Retort, and diſtill them into black Oils, then may the Oils be clarified with Spi-

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rit of Salt, and be reduced into ſweet Oils and Balſams. Nor will any man eaſily believe what notable Vertues there are hidden in the mountainous and terreſtrial Minerals, and yet not uſefull at all inwardly, becauſe of their Arſenical nature, which may with eaſe be taken away from them by Spirit of Salt, and be thereby more ſecurely uſed as to Medicine. And had I not purpoſely tried it, I would not at all have written of it. For information therefore of the unexperienced, I will tell you a ſtory, whereby it will appear, that thoſe Minerals do uſually lodge in them evil and venomous Arſenical Spirits.

In the County or Province of *Erbach*, ſcituate between the *Mæne* and *Neker* in *Franconia*, is found plenty of a Sand knit as it were together by a fluid Mineral, and grown together into huge heaps like little Mountains of a duskiſh colour; which if you lay on burning Coals, emits a ſweet odour altogether like Amber. When I ſaw it, I put ſome into a Retort, and diſtilled an Oil thencefrom, wholly like the Oil of Amber both in colour and ſmell, and had uſed it in its ſtead, had I not ſhortly after tried another knack: For ordering the Chambers to be ſumed with the Sand, becauſe it yielded ſuch a fragrant odour, I very ſeaſonably obſerved that that ſume was unwholſome and venomous, for it cauſed pains of the Head, and a kind of nauſeate, 'twas alſo offenſive to the Stomach, and this made me leave off my Fumigations, and ſet about rectifying the Oil thence diſtilled, by the Spirit of Salt, and by this means I got a clear and pure Oil, and the Spirit of Salt attracted to it ſelf the Arſenical Eſſence, which being purged and rectified, yielded me at the bottom real Arſenick, whence I perceived that all thoſe Minerals are very Arſenical, and no ways fit for internal uſe, unleſs they be firſt mundified by the Spirit of Salt. Many ſuch kinds of Minerals are to be found, which we neither care for, nor know: ſome of which are as hard as a Stone, ſome thin, ſome fluid like Oil; ſuch an one is that Fountain about *Baccharach* that boils up in the middle of the *Rhine*, and fills the whole *Rhine* for about three miles ſpace and an half with its fatneſs, and yields a moſt fragrant odour, is of a duskiſh colour. For as I was ferrying by it, I took up ſome of the water in my hand, and queſtionleſs the Fountain of it muſt needs flow very plentifully, foraſmuch as the whole River *Rhine* is filled therewith as far as you can ſee, and yet ſcarce one Man amongſt a hundred or a thouſand doe in their ſailing by it take notice thereof. Doubtleſs this Fountain hath its efflux and riſe out of the Mountains which border on each ſide the River. Did it break out at the top of the Earth, it would be worth Gold and Cedar, but lying ſo deep, 'tis of no uſe. Were curious Men inhabitants there, they would doubtleſs find out this Fountain; For on this part of the *Rhine*, where the City *Baccharach* lies, is a high Mountain, where grows pretious Wine, and is in Foreign parts ſold at a dear rate, becauſe of its moſt ſweet ſavour and odour, and by the Inhabitants is called Muſcadel, and 'tis a ſort of Wine produced onely in this Mountain; nor can the neighbouring adjacent places make the like. Hence I preſume that this Fountain at *Baccharach* ariſeth from a Mineral Oil, flowing out from this Mountain into the *Rhine*, and that hence alſo ariſeth the goodneſs of the Wine. And whereas this Mountain affords not ſuch a quantity of Wine as the Inhabitants wiſh, they bethought themſelves of a remedy for this ſcarcity, caſting in Herb-ſcarlet into the common Wine, from which it got the ſame kind of taſte, and became almoſt Muſcadel. Nor let it ſeem ſtrange to any one for the Wine to attract a ſavour from the Earth lying about it, for 'tis very certain, and I my ſelf have tried it; And ſince it is ſo that this matter affords me opportunity of ſpeaking of theſe things, I will give you my opinion more clearly in what follows.

Below *Frankford*, ſome four miles from the River *Mæne*, there lies a Village called *Hohenheime* under the *Moguntia* Elector, and there's a Mountain which yields very good Wine, though not of ſo delicate a ſavour as that of *Baccharach*, yet 'tis of a ſweet ſmell, whereby it exceeds all the Rheniſh Wine, and is therefore dear; The cauſe of this, I attribute to the Soil, in which the Vines grow, which Soil brings forth Stone-Coals, and were heretofore digged hence, and are now again ſought after, which Coals have in them a ſweet Mineral Oil, as I ſhall ſhew you. Farther, there lies a high Mountain at the River *Mæne* about the Caſtle *Klingenberg*, ſcituate between *Odenwall* and *Speſſart*, where that Earth is found too, ſuch as I above mentioned, which yields a ſweet Oil in diſtillation. And this Mountain doth likewiſe produce ſweet and good Wine, ſo that it yields not a whit (in its kind) to that of *Baccharach* or *Hohenheime*. But now whether or no the Mineral Oil that is not far off to be here found, be wholly the cauſe, I doe not affirm, but I believe it, for my part, ſo to be, let another follow his own opinion. There is alſo a great Mountain at *Herbipolis*, at the *Steine* ſo called, that yields pretious Wine, but not of a ſavour like theſe three. Hence aroſe that Proverb: At *Baccharach* on the *Rheine*, *Herbipolis* on the *Steine*; *Klingenberg* on the *Mæne*, and *Hochheime* on the *Rehn*, are the four beſt Wines.

I confeſs there grows good Wine every-where on the River *Mæne*, but yet theſe four do far exceed all the others, and that haply becauſe of that ſweet ſavour which they attract out of the Earth where they grow. For it is certain that the Vine doth draw an odour and ſavour (more than all other Plants do) out of the Earth, whence it hath its nutriment: So that it is not very difficult for a good Phyſician to communicate to the Vine any ſavour that he liſteth (which will be) according to the nutriment which is put to the Root. I make no doubt but that there will be ſome Zoiliſts that will make a mock of theſe Reaſons of mine, as concerning the ground and riſe of the taſte of the Wine at *Baccharach*, *Herbipolis*, *Klingenberg* and *Hochheime*, and will not attribute the cauſe to the Soil, but ſay that my Reaſons are invalid ſhallow ones, the which deriſion I ſhall patiently undergo: ſuch kind of Men will rather drink the good Wine even to exceſs, than produce any reaſons whence the ſavour proceeds. But I ſpeak experimentally, and ſay that the Vines do attract a ſavour from the Soil whence they are planted; the which I have many a time tried and found ſo to be. Verily the Gardiners know, that Man's dung will give a nutriment or encreaſe to Flowers, but yet will put an odd ſmell upon them; And therefore do they carefully ſhun the putting it to the Roots of ſweet-ſmelling Flowers, but uſe it rather to ſuch as are void of odour, as Tulips and ſuch-like, that ſo they may grow the ſooner. 'Tis alſo evidently obſerved, that if the Root of the Vine be planted in ſuch a place where Man's dung lieth, it acquires an unpleaſant odour, and the Grapes are thereby ren-

dered unfit to be eaten. Beſides, the moſt curious Vine-dreſſers have long ago attained to this experience, that if the Scarlea or any other odoriferous Herb be applied to the Root of the Vine, it will beſtow its Odour on the Grapes, (but it ſerves for no more years than that onely) whereas if they pour upon the Root an Oil of a ſweet and ſtrong Odour, that Vine will produce Muſcadel for ten years and more, the which I have handled at large in the Vegetable work, and do mention it herein briefly upon this account; Becauſe that a Mineral Oil lies hid in the Earth in abundance, the which being incorporated in Plants, but in Vines eſpecially, produceth excellent Fruits, whereof but a few Men have the knowledge.

But now that I may yet demonſtrate this more clearly to the unskilfull, and conſequently incredulous, *viz.* that there is a moſt great ſweetneſs in the Minerals, which may here be extracted by diſtillation and rectification with Spirit of Salt, I will inſtance this example: 'Tis well known to all Men that the Stone Coals which are in many places digged out of the Earth, doe (being burnt) emit an ungratefull Odour, and are hence uſually eſteemed of as venomous; but in thoſe places where they are plentifully digged, they are daily uſed in coction, nor doth any hurt ariſe therefrom: So that it muſt needs be acknowledged, that they do not ſtink of themſelves, but that the Fire onely is the cauſe of the ſtink, and that their innate fatneſs is of a ſavoury and ſweet-ſmelling nature, yea ſo ſweet as any Vegetable, as I can eaſily evidence. You have an Example in Roſes, or any other Vegetable, which if diſtilled by a Retort, loſeth its ſweet odour, and puts on a ſmell of burning too: What hinders from being ſo in Minerals, as in Pit-Coals, and the like? I grant indeed, that if enough Oil would come over out of the Vegetables by an hot Still, there would be no need of this diſtilling by a Retort, and rectifying by Spirit of Salt, becauſe it requires a great deal of labour; but foraſmuch as there doth not diſtill enough over, 'twill behove us to acquieſce in this method. Nor fear I to affirm, that if it were poſſible to diſtill an Oil out of ſuch Coals by a hot Still, it would give place to no Aromatical Oil whatſoever in the ſweetneſs of the ſmell. From whence, I pray, ſhould ſo many kinds of Herbs draw ſuch various Odours and Savours, were there not lying hid in the Earth an Univerſal Sulphur or Balſam?

But to put an end to this diſcourſe, and that I may ſhew that the Pit-Coals do contain in them an Oil or pretious and wholſome Balſam, no whit inferiour as to its Vertues to any of the moſt pretious Oils or Balſams brought us out of the *Indies* obſerve but this proceſs.

Fill a Retort with Coals, and diſtill a black Oil, the which ſeparate from the Acid-water that came over the Helm with it, and rectifie it by Spirit of Salt, and ſo there will firſt of all come the clear and pure Oil, then a yellow Oil, not ſo ſweet as the former, and the thick and black Oil remains behind, and ſerves for to be mixt with Emplaiſters; for 'tis a wonderfull healer, by reaſon of its innate ficcity; now the yellow Oil may be yet farther rectified once more by Spirit of Salt, that it may become pure, white, and fair: But if you are yet farther minded to make a difference betwixt theſe pure Oils, and will again rectifie them with new Spirit, then ſhall you take the moſt pure part by it ſelf, which as to heat, ſubtilty, and ſweetneſs, is fully equal to the true Oil of Peter; and which being kept apart, and uſed for cold accidents, both inwardly and outwardly, will do the ſame, yea and much more than is attributed to the Oil of Peter. Nor is there any fear at all of theſe Oils being Arſenical, for the Spirit of Salt hath took off all the Arſenick in the rectification, and if you pleaſe you may uſe the Oil which comes next after the moſt ſubtile Oil in mixing it with Balſams, or it may be ſafely uſed by it ſelf, either inwardly or outwardly, and 'twill perform wonderfull things, and ſuch as exceed belief, foraſmuch as in Pit-Coals lieth a moſt great Balſamick vertue; If the depurated Sulphur which we ſpake of afore be diſſolved with this Oil, and reduced into a Balſam, thou ſhalt have a Medicament, which may deſervedly be ſtyled an Univerſal terreſtrial Mineral Balſam, and doth both as to inward and outward uſes far exceed all other Balſams: And therefore 'tis in my mind to prepare this Balſam in great quantity, for the benefit of Mankind: The moſt notable Vertues thereof ſhould I deſcribe, the very deſcription would amount to a particular Treatiſe, but that belongs not to this place, but it ſufficeth me to have at this time explained the manner of the preparation. I may haply (if God pleaſe) more largely teach concerning its Vertues, another time, as likewiſe the Vertues of the reſt of my Medicines.

And thus will I put an end to the Third Part of my *Pharmacopœa Spagyrica*, in which I have (in my opinion) mentioned ſufficient enough; and although it be but a ſmall Book to ſight, yet do great things lie hidden under it, which one amongſt a thouſand will ſcarce comprehend. But that the well-minded Reader may underſtand, what reality there is lies hidden in this Treatiſe, I will here teach by way of an Appendix one Proceſs onely, whereby it ſhall evidently appear how noble the Art of Purging things by diſtillation is. This operation is well enough known in the Vegetables and Animals, *viz.* that always from the thing you diſtill, the purer part comes over firſt, then the more vile part, but the unprofitable earthineſs abides in the bottom with the fixed Salt. Now in Metals this Proceſs is not ſo well known, nor will it be ſo ſoon made publick and common, nor indeed is it expedient, for this world is not worthy the knowledge thereof. But that I may ſatisfie my promiſe, and ſhew, that Metals may by diſtillation be made Spirits, and purged in the higheſt degree. I will make uſe of this following Example: 'Tis known to every one, that if any dry thing is to be diſtilled by the fire, ſome moiſture muſt be mingled therewithall, which may attract to it ſelf the groſs and heavy part, as you may ſee in the common diſtillation of Herbs, to which Herbs (when dry) Water is added, with which their ſavour and vertue diſtilleth over: And to every dry thing there is requiſite its proper humidity, which muſt of neceſſity have a Communion or Affinity with the dry, if it be to bring over the dry with it ſelf. Now common Water is able to carry over (in diſtilling) the odour and ſavour of Herbs, yea and of Salts, but not of hard Sulphureous or Mercurial Minerals, much leſs of the fixed Metals. But foraſmuch as Metals are Homogeneal, and cannot be purged by any force of Fire, nor ſeparated from the impure part, unleſs they be diſſolved by agreeable and convenient *Menſtruums*, and be rendered apt by diſtillation, for always that which is brought into Flores doth (if reduced) yield ſuch a Metallick

body

body as it at firſt came from. Thence aroſe an opinion of an impoſſibility of ſeparating the pure part from the impure. Indeed to the blockiſh and unskilfull all things ſeem impoſſible, and therefore from them is not to be lookt for any judging of good ſecrets.

But to return to my purpoſe, and ſhew that a Golden Eſſence may be diſtilled and ſeparated out of the crude Metals by Diſtillations, I will make uſe of a common Example. Diſſolve in a Common *Aq. Fortis*, made the uſual way of Niter and Vitriol, one Ounce of pure Silver; which being wholly diſſolved and reduced into pure Water, pour out the Solution gently into another Glaſs, that ſo if haply any Gold were mixt with your Silver it might ſtay behind, and not be diſſolved, or mixed together, leſt the Experiment prove fallacious. Then ſome common Salt is to be diſſolved in common Water, the Salt to be in weight equal to your Silver; and this Water is to be added to the diſſolved Silver, aud to be ſo long poured out of one Glaſs into another untill it be well mixt, then let it ſettle, and let the pure Water be poured off, and a white Powder of the Silver will remain, which is again to be macerated with pure Water ſeveral times, untill the Calx of the Silver be freed from all Saltneſs and Corroſivity; Then dry it, and you ſhall have a white and tender Powder, and very fuſile, ſo that it will melt even with the flame of a Candle, and is not unlike to a *Mercury*, but may well be called the *Mercury* of *Lune*, but the Chymiſts uſually call it the horned *Moon*, for being molten it reſembles the ſhape of an Horn, and with this may be wonderfull things effected both in Medicine and Alchymy; but belongs not to this place to ſpeak of, and therefore are to be but juſt hinted. And like as we have ſpoken of *Lune*, ſo likewiſe muſt we proceed with *Saturn*; and he will alſo yield you a white Volatile and fuſile Powder, as eaſily melting, yea eaſier than the *Mercury* of Silver, and is deſervedly called the *Mercury* of *Saturn*. Theſe two are willingly aſſociated to a third, *viz.* to Common *Mercury*, and do fix him, and ſo is that Axiome of the Philoſophers fulfilled, *Nature rejoyceth with Nature, Nature overcomes Nature, Nature retains Nature.* Farther, theſe *Mercuries* do admit of diſtillation and a ſeparation of the pure part from the impure, no otherwiſe than as doth a Vegetable. But the way of doing this is not to be ſo haſtily written, I ſpent a whole year in ſearching after it, till I found it, and ſo let another ſeek; and if God grants it him, he may enjoy it; And if God vouchſafeth him ſo much, he will alſo give him the knowledge how to uſe it: If the *Mercury*, which in it ſelf is white, volatile and fuſile, is rendered more white by diſtillation; 'tis alſo a neceſſary conſequence that it will become likewiſe more volatile, more fuſile, and more pure: but of this enough.

But to come yet nearer to the matter, and to ſhew that Metals may be ſo ſeparated by diſtillation as to become golden, take this Example: Take two Ounces of the aforeſaid horny *Lune*, and reduce it into Corporeal or pliable Silver, and ſeparate it by a Cupel, for then thou art aſſured that no other thing is in it but Silver: Diſſolve this Cupellated Silver again in common *Aq. Fortis*, and it will leave a good part of Golden Calx. Now it may be demanded, whence comes this Golden Calx? Comes it from the Silver, or the *Aq. Fortis*, or from the Salt-water, all which three were in uſe in the precipitation? I anſwer, that the Spirit of Niter brought over with it ſelf, in the diſtillation, a certain Goldeniſhneſs from the Iron and Copper which were in the Vitriol, and that in the form of a Spirit, and aſſumed its Body from the *Lune*. Now if any other Body concludes it to be otherwiſe, *viz.* that the aforeſaid Gold comes from the *Lune* onely, and not from the *Aq. Fortis*, I do but ask him this Query, Why the very ſame ſort of Silver, being diſſolved and precipitated out of the *Aq. Fortis* with Salt of Tartar, or by Copper Plates, be not equally as golden as this is which is precipitated with Salt-water? But ſome may yet urge farther, that this Gold proceeds onely from the Salt with which the Silver is precipitated, and not from the *Aq. Fortis* or Silver, becauſe the Silver being diſſolved in *Aq. Fortis*, and precipated with Braſs Plates, or the Liquor of Salt of Tartar, yields no Gold; but that onely gives Gold which is precipitated with Salt-water. To anſwer this Objection, and clearly to demonſtrate that this Gold owes its Original to them both, *viz.* the Tincture to the *Aq. Fortis*, but the Body to the Silver, and not to the common Salt, (for though there lies hidden in all common Salt a certain Golden power, which may be thence drawn by Art, yet that is not to be done this kind of way, but by another, which we mention in our Book called *the Conſolation of Sailours*) I do certainly know, that this Gold proceeding from the precipitated Silver, doth ariſe from the Vitriol and Silver onely, and not from the Salt: And this may be clearly obſerved thus; If you add to the Vitriol and Niter a Verdigreaſe prepared with Sulphur and Salt, the *Aq. Fortis* will be twice more Golden than if 'twere made of onely Vitriol; the reaſon is this, becauſe the Iron and the Copper are fixed in the Vitriol, and do not eaſily yield Gold; but if the Copper be firſt reduced with Salt and Sulphur into a Volatile Calx, and be added to the Vitriol and Niter, then is this kind of Labour done to profit, elſe not: This which I write is onely to demonſtrate the poſſibility. And ſhould you add to the Vitriol and Niter, or to Allum and Niter, other Species containing Volatile Gold, as *Calaminaris*, *Zinck*, and ſuch like, the Water will be rendered ſo much the more Golden: But if you add to the Niter and Vitriol ſuch Species as contain in them Volatile Silver, ſuch as are *Cobolt*, *Biſmuth*, *Arſenick*, then the *Aq. Fortis* is rendered more Silvery, and makes part of the Copper in the Solution purely Silvery, like as the Goldeniſh water when 'tis in the Solution makes part of the Silver Golden. By which it is demonſtrated, that crude Metals are depurated by diſtillation, and may be made Volatile, and that by that means of Solution, Corporal Gold and Silver may be precipitated out of the Metals, according as the Diſſolvent is prepared out of Golden or Silvery Subjects.

This Example I account ſufficient to evidence, that the crude Metals may be purged by Diſtillation ſo as to become golden. If then it be ſo with the crude and impure Metals, what then may be done with the pure ones if they be made by Diſtillation, yet more pure; without all queſtion a moſt excellent medicine might be from thence prepared, and far to be preferred to Gold or Silver. This diſcourſe do I here make uſe of to the intent that it may be ſeen, that even fixt metals being after a due manner opened and made volatile, are capable of ſending out their beſt part, and of being ſeparated by Diſtillation from the more crude part. But this Treatiſe appertains not to Alchymy but to Medicine, and yet I thought

thought good to induce this argument, *viz.* (that out of crude Vitriol, may a volatile Gold be drawn by Diſtillation and be incorporated with Gold and Silver) to this end that all men might know of a certainty, how much good may be done in metals by Diſtillation, and what a pure ſubſtance may be thence drawn. Nor doth *Baſil Valentine* that *German* Philoſopher, doubt expreſly to write that the Philoſophers Stone is full as eaſie, yea eaſier to be prepared out of Vitriol than Gold. If therefore the higheſt univerſal medicine both for man and metals may be prepared out of common Vitriol, why may not the ſame be poſſible to be done out of the purer metals if they were reduced into Vitriol, and ſo as to admit of Diſtillation, whereby the pure may be ſeparated from the impure.

If now the common Vitriol of Copper and Iron, do in Diſtillation yield volatile Gold, why ſhould not the Vitriol of *Lune* do it much more and yield it nobler, as being indeed the true and onely metallick Vitriol of the Philoſophers, which *Baſilius* appoints to be taken for his Work, and doth truely deſerve the name of Vitriol. For if you would have your common Vitriol tinge, you muſt add Galls thereto, but this Vitriol doth truely blacken all things without Galls. But you muſt not imagine that I do here intend ſuch a Vitriol of *Lune*, as is by ſolution (in *Aq. Fortis* reduced into a white Cryſtal, or ſuch as is precipitated by the water of Salt out of the Solution (in *Aq. Fortis*) no ſuch matter? For this reſembles not Vitriol, becauſe it may be again reduced (into Silver.) But the true Vitriol of the Philoſophers is prepared out of *Lune* without *Aq. Fortis* or ſuch like Corroſives, and is not reduceable in the ſtrongeſt Fire, but remains a Vitriol, tingeth the Tonge, is aſtringent, and yields a golden Water, which diſſolveth Gold and fixeth it therewith. Such a Vitriol will we make uſe of in medicine and Alchymy, and leave the common Vitriol for the Dyers. The Ancients called their Salt Vitriol, on this account, becauſe that it did as to its external Figure reſemble Vitriol, but though they ſo called it, yet they took not the common Vitriol, which every wiſe man may be eaſily perſwaded to believe. So then let the *Lune* be the Earth, Gold the Seed, and *Mercury* the (Water, but not the common *Mercury*) with which it is to be watered, and let the reſt be committed to God and Art. Thus far have I declared to you my opinion, let every man follow his own. But thus is confirmed the aſſertion of that excellent Philoſopher *Baſil Valentine*, who affirms, that even out of common Vitriol may be extracted a certain goldenſhneſs; how much more credible then is it, that a Vitriol prepared out of the more pure metals may yield a better goldenneſs. Every one may believe what I here write for I have oft times tried it, but yet I have received more Gold ſometimes than at other ſome according as I ordered my proceſs, and reduced my precipitated Silver; for you are to know, that ſuch a kind of Silver as is precipitated out of *Aq. Fortis*, by the Water of Salt is wholly volatile, nor melteth it like to a Calx of *Lune*, but goes away partly in fume, and part is reduced into an horny Stone, and yet by a peculiar Diſtillation doth all come over, but enough of this. Hereupon is Salt of Tartar to be added to this volatile Calx, leſt being molten it vaniſheth away in fume, for Borax doth not prevent it. But it melteth better if it be help by that notable fluxing Powder, made of Niter, Tarter, and Sulphur, and it be kindled by a little Coal and burnt up, but then all the Silver doth not melt, but part of it goes away in fume. *N. B.* If you catch this fume which is a thing eaſily done, it reſembles the form of a red Powder, and will abundantly recompence your pains, nor may that ſaying of *Paracelſus* be unfitly applied hereunto, *viz.* to corrupt is totally to perfect, becauſe theſe Flores of Silver are not loſt, but are of a greater price than the Silver was. He that well knows this labour (for indeed experience is the beſt maſter) will not labour in vain. And if he learns nothing from this little here taught, neither will he find out ought from a greater. For I have in theſe few words revealed much, yea haply more than I ought to have done. All which we do in the firſt and chiefeſt place attribute to God, next him to Niter, which renders Metals ſo fluxible. From hence may the well minded Reader percieve that there is in Niter, not onely a power to fix all volatile Minerals and Metals (of which I have treated in my ſecond part of the Proſperity of *Germany*) but alſo of making them wholly volatile, ſo that they may be diſtilled and purged, as is ſufficiently evident in the aforegoing example: Beſides, there is another way of making Metals volatile, as well as by Niter, but ſo as that they be not wholly diſſolved, but are by a moiſt nitrous Fire reduced ſo far as to retain the form which they put upon themſelves in the ſaid moiſt Fire, and yet they become ſo volatile, as to ſuffer themſelves to be wholly diſtilled and ſublimed, and will in the *Proba* give Gold, the which the gradatory Water hath made in them. But of theſe things more at large in the fourth part of the Proſperity of *Germany*: Thus with what hath been ſaid, will I finiſh the third part of my *Pharmacopœa Spagyrica.*

The End of the Third Part.

THE

THE FOURTH PART OF THE Spagyrical Pharmacopœa.

Treating of the four principal Pillars of Medicine, *viz.* Sulphur, Vitriol, Antimony, and Mercury, but chiefly of the great harmony between the Superiour Elementary Sun and Moon, and the Inferiour and Terrestrial Gold and Silver, and the magnetick way of attracting the Virtues of *Sol* and *Lune* by the Air, and of rendring them palpable and visible.

READER,

After that I had intended to publish in the Fourth Part of this my Spagyrical Pharmacopœa, *some singular and excellent Medicines, and such as might much exceed all others, and so must consequently be prepared of choice and excellent subjects and matters; I accounted it my task in the first place to shew you out of what subjects such efficacious Medicines may be drawn and extracted,* viz. *out of Gold, Wine, and Antimony, as likewise out of Vitriol and Mercury, but not the vulgar Mercury.*

Now although most Men are blinded with a thick darkness, but principally those that prosecute the truth with a deadly hatred, and do prate much, and by reason of their blindness and ignorance do affirm, that Gold being a thick and compact body is not at all fit to admit of such a preparation as thereby to display its most efficacious virtues in Man's Body: And as for Antimony and Mercury, that they are most present Poisons, and can't serve as Medicines without great danger; but as for Wine, that it is indeed fit to be drunk, but is of no validity in Medicine, not knowing how to imploy it about any Medicinal use, but are rather ready and skilfull Artists at swallowing it down in full draughts; however though they thus chat yet these objections are frivolous, and do proceed from their ignorance which is wrapped about with most thick Clouds, and which I refute by this brief and strong Reply. But I do not at all deny, that Gold reduced even to the smallest Powder, and so made use of (as 'twas wont of old to be by the Ancient, yea and latter Galenists, and is even too at this day) by mixing it with such Medicines as are for the comforting and strengthning the Heart and Vitals of Men, cannot contribute so much as the least Iota *to the health and preservation of the body of Man: And so I say of Antimony and Mercury, that they are not at all salutiferous to Man's Body, but contrariwise are deadly and destructive Medicaments, untill (by a due preparation) they are deprived of all their Venenosity, and thereby rendred fit to be safely made use of. So Wine it self being taken* per se *as it is, is a restoring and refreshing Drink for Man, provided it be moderately used: But contrarily is a causer of many Diseases if it be frequently and in large quantities swallowed in, and doth operate in Man's Body more hurt than good, this daily experience doth sufficiently testifie, and renders it evident, that being so immoderately taken, it fills all the Members of the whole Body with Tartar, and makes obstructions and stirs up intolerable Pains, and principally in the Bladder, Reins, and other parts of the Body,* viz. *if coagulated in the Hands, Knees, and Feet, whereupon it doth not easily suffer it self to be exterminated, unless by such Artists as well know the properties and nature of Tartar, but of such Men there is at this day a great scarcity, and therefore that proverbial Verse still takes place.*

Solvere Nodosam Nescit Medicina Podagram.

The Art of Physick can't root out
(Thy dire Disease) the Knotty Gout.

But he who is ſo well skilled as to ſeparate the fiery, penetrative, wholſome, and true Medicinal Spirit of Wine; Yea its true Balſam from its Fæces, he will eaſily expel out of the Body of Man all tartarous impurities and defilements, and will perform things wonderfull in the Stone and Gout. But now foraſmuch as the educing ſo wholſome a Medicine out of groſs crude Tartar is known but to a very few, no wonder that there hath been ſo little or rather nothing at all performed by Phyſicians in ſuch like moſt grievous tartarous Diſeaſes that have gotten deep rooting in the Body of Man. But the way how you may be rendred Poſſeſſors of ſuch a Spirit of Wine ſhall be ſpoken of afterwards. Yet I would not that any one ſhould perſwade himſelf that my meaning and intention in this place is about the common Spirit of Wine, or either that which is gotten out of Tartar by the uſual known way of Diſtillation. No, there's a vaſt difference betwixt that Spirit which I here make mention of and the other. For in this Spirit the crude Tartar is firſt to be waſhed by common Water from all its Defilements, and that without the addition of any other things, ſo as to ſhine like Snow, then to be afterwards made black by putrefaction, and out of that blackneſs the ſaid Balſam is to be drawn off, of which we ſhall hereafter make a more ample Declaration. This now is that Spirit which doth Anatomically reſolve the compacted Body of Gold, and converteth the venemouſneſs of Antimony into a wholſome Medicine, and doth perform things wonderfull in all tartarous Diſeaſes. 'Tis the true Wine of Health, and the very Aq. Vitæ *of the Philoſophers, and hath a great familiarity with Gold and Man, and may be excellently compared with the coagulated ſolar beams.*

Therefore as it is evidently known to every body, that Gold and Wine are advanced on to maturity, by the heat of the Sun, and that Men do notably love and deſire both of them. So may any one conjecture what Gold and Wine would do if a Man could but have them reduced to a ſpiritual eſſence. Hence now it ſeems neceſſary unto me, that before I paſs on to the preparation of the ſaid Medicine, I do in a few words deſcribe the harmonial love that is between the ſuperiour and inferiour Sun and Man, that ſo it may appear, what a bond or tie of love and neceſſity there is betwixt theſe three moſt noble Creatures of God, to one another.

CHAP. I.

Of the Harmony and Agreeableneſs between the Superior Elementary, and Inferiour Earthly Sun, with Wine and Man.

'TIS well known even to the blind Bayards and Barbars, that the Sun in the heavenly Firmament, is the moſt noble and moſt eminent Creature God made. For it is that onely light which makes all the Stars partakers of its Splendour, Light and Brightneſs. 'Tis alſo the onely Fountain and as it were Father of all the Creatures, becauſe if they are deprived of it, they are in the dark and die: Nay even man himſelf cannot live without the help of the Sun, and all things would periſh, ſhould the Sun be but one moment withdrawn from them. For all things that are do receive their Life and Augmentation from the Sun; and he was (according to *Moſes* his Doctrine) the firſt and chiefeſt that did proceed forth by God's creating, and will doubtleſs be the laſt when all things ſhall be diſſolved, and paſs into a better State at the final Deſtruction of this worldly Fabrick. The Sun ſupplies the place of a heart in the wonderful Structure of the Macrocoſm: And in like manner the heart it ſelf in man's Body is aptly compared to the Sun, as being the firſt liver, and laſt dier in the humane Fabrick; and this is known to every body. And therefore amongſt all the Creatures indued with life and motion, man doth in nobility and magnificence excel them all, as having gotten his body from the earth, his Spirit and Life from the Sun, and his Soul from God.

But as to the inſenſible Creatures the higheſt Degree of Nobleneſs is attributed unto Gold, the which is likewiſe generated by the Sun. Theſe three admirable Creatures, *viz.* the Sun, Man, and Gold are coupled with a bond of wonderfull Neceſſity and Friendſhip, and are conjoined by the inſtinct of Nature her ſelf. Men do deſire the Light of the Sun, as alſo its heat in a dark and cold Seaſon, for thence-from proceeds all life, and all the encreaſe of life, becauſe the Suns beams do perform the office of the univerſal Spirit, and Life in the Conſervation of the Life of Man. But now as touching Gold, men do partake of that in a particular way onely, and one man is uſually ſtored with a bigger Portion, another with a leſſer, not by the inſtinct of nature, for ſhe beſtoweth it on us onely for our uſe, but by reaſon of the abuſive malice, avarice and the unſatiable Covetouſneſs of men; but yet this way is not the right manner of loving Gold, nor genuine, but falſe and oft times very hazardous. We ſhould rather love it becauſe of its wonderfull Vertues which it poſſeſſeth, hidden in its body, and may afford a moſt notable Comfort to man's ſickneſs and infirmities. Verily the Ancient Philoſophers were not ignorant of the incredible Vertues, which the Gold hides in it ſelf, it being truely no other thing than a body conſiſting and compacted of the coagulated and fixed Beams of the Sun, and this was well known to thoſe men who were moſt skilfull in the nature of all things. Seeing then that the Sun's beams being as yet unfixed can beſtow on all things life and encreaſe, why may not the ſame be accompliſhed by them when fixed, and made conſtant, if ſo be they be rendred ſpiritual, and thereby be capable of diſplaying their Vertues in a viſible and palpable efficacy, which thing they could not do if they retain their corporal Coagulation, nor can diſplay their occult Vertues.

Many

Many men have induſtriouſly attempted with great Labour, artificially to open Gold, and to reduce it to a ſpiritual Nature, and to render it living and efficacious, but few there have been that have been Maſters of their deſires, but ſuch as at length had thereto attained, did perform things wonderfull in the ſickneſſes of mankind, and this is witneſſed by many moſt true Hiſtories, as for inſtance, by the *Turba* of the Philoſophers, and by the *Theatrum Chymicum*. The which Books do indeed deſcribe ſuch a notable ſecret, but ſo obſcurely and intricately, as that no body can therefrom learn its preparation, unleſs God reveals it to them, or it be manifeſted by ſome good friend or other that knows the Art. 'Tis no wonder that amongſt many thouſands of Searchers, ſo very few do arrive to the knowledge of the ſame. For God hath barred up this ſo great a ſecret with ſuch firm bolts, that all wicked and malicious men are eaſily excluded from the knowledge of finding it out. Verily I muſt needs ſay (but I boaſt not of it) that I ſee by what means thoſe bonds are to be looſed, and that precious Pearl may by removal of thoſe bolts be taken forth. But yet I profeſs not my ſelf to be a perfect and abſolute Maſter, and ſuch an one as perfectly knows its preparation, and would make it publick by deſcribing it. No! the Crumbs ſerves my turn, and the Fragments of the Bread, with which hunger may be allayed as well as with the Bread it ſelf.

I have I confeſs taſted ſomewhat of the Crumbs of what pertains to ſo worthy a Medicament, and with what great Vertues they abound. And ſuch things as my experience have adminiſtred unto me I have here purpoſed to reveal them, for the comfort and ſake of my Neighbour, as far as the time and occaſion will permit; but yet with this *Salvo*, that I caſt not Pearl before Swine, and ſo incur the Philoſophers Curſe. To whomſoever the things that I ſpeak ſhall be more obſcure, let him wreſtle earneſtly by his Prayers to God for light, and refrain from troubling me with multiplicity of entreaties, for I have firmly reſolved with my ſelf not to reveal for the time to come more than what I have opened in the preſent deſcription.

CHAP. II.

Of Gold, and the Compariſon betwixt it when living, and when dead.

IT is ſo well known as that nothing can be more known, that Gold being ſo compact and corporeal and without any opening, doth not when uſed inwardly to man's Body emit any Vertues at all. I will inſtance in one Example of Mercury; This being living and unbroken and undiſſolved, doth not, though uſed inwardly in a great weight, bring any hurt, but paſſeth out again as 'twas before taken in without any alteration of the Body. But if it be ſublimed with Salt, or ſhall be diſſolved by ſome other corroſive Water, and be adminiſtred to a man to drink the quantity of 1, 2, or 3 Grains it will ſhrewdly hazard his Life, becauſe the Salts have made its hidden lurking Poyſon manifeſt. Thus ſtands the caſe with Gold, which cannot ſhew forth its hidden force and vertues as long as it remains bound and tied with the fetters of its own compaction, but (on the other hand) diſplays them, aſſoon as ever it ſhall be releaſed from its bonds, be vivified by Salts, and rendred efficacious. You ſee in a black Coal, whiles it is not fired, there is not any heat at all perceived, but being kindled, and being by the Air rendred living, it diſcovers the fire and heat being therein hidden, the which you may likewiſe conſider of concerning Gold.

CHAP. III.

Of the Preparation of Gold, and its Diſſolution into moſt tender Atoms apt for vivification and profitable application to Medicinal uſe.

GOLD doth not by any way more eaſily admit of being turned into moſt tender and moſt ſubtil Attomes than by this following.

Diſſolve pure Gold in *Aq. Regia*, and being diſſolved pour thereto as much of the Water of Tartar as is ſufficient: So the clear Gold, and clothed too with a golden Colour, will precipitate it ſelf to the bottom of the Veſſel, nor will it be a darkiſh Powder, as 'tis wont to be if precipitated by *Lixiviums* or by the Spirit of Urine: But it is light and tender, and ſhews in brightneſs like little golden Stars, yea becomes ſo very tender and ſubtil, that it ſwims as 'twere in the Water and ſettles to the bottom exceeding leaſurely, and is thereby ſo much worthier than all other *Calxes* of Gold how ſubtil ſoever they be, that they may be accompted of (if compared with this) but onely as a groſs Earth; whereas theſe ſhining golden little Stars are made ſo tender and ſo ſubtil, as that they may eaſily diſcover and demonſtrate their Vertues in medicinal uſe very notably, by the help of other things, and by being diſſolved ſundry ways.

CHAP. IV.

By what means this moſt pure Calx of Gold is to be farther opened, whereby it may be inverted, made volatile, and rendred like to a Vegetable.

THIS tender *Sol* or *Calx* may be brought to ſuch a paſs, without any corroſive in 24 hours ſpace, as that it ſhall not remain a fixed metalline Body, but become wholly volatile as it was at its beginning. Now this is effected by the help of the Salt of Nature onely, which is to be found every where, and may be gotten by the poor as well as by the rich. Yea ſo eaſie as that it is ſcarce credible, ſhould it be manifeſted openly and clearly, and which thoſe Brethren of ignorance and proud Court-like Flatterers would entertain with ſcorn and deriſion, and accompt the truth it ſelf to be a lie, as hath been oft times done hitherto. 'Tis better therefore to paſs over ſuch things in ſilence, than by benefitting others to injure ones ſelf. For ſuch Arcana's are to be wrapt up in ſilence, and not to be caſt before ſuch Hogs. But yet to the Adept ſhall be revealed ſuch things in the end of this writing or treatiſe, as they have been hitherto ignorant of.

CHAP. V.

Quæry, *Whether or no theſe moſt ſubtil Atoms of Gold are capable of performing any thing in Medicine, and of diſplaying their hidden Vertues like Vegetables, without any other unlocking of them.*

FOR anſwer, I ſay no. For the Stomach is too weak to diſſolve and get thence that efficacy as it doth

doth from Vegetables, though it be thus reduced in a moſt tender and ſubtile ſubſtance. In vain therefore is it adminiſtred to the ſick, becauſe it paſſeth out again with the Excrements ſo as 'twas taken in, and that without any remarkable efficacy.

CHAP. VI.

Quæry, *Whether or no the Stomach may not be ſo help'd as that it may be able to diſſolve and conſume Gold as well as Iron and Copper.*

FOR anſwer I ſay, yes. And foraſmuch as the moſt thin filings of Iron and Copper, being given any one to drink, are digeſted and conſumed by the natural acidity of the Stomach, or are by diſſolution there turned into Vitriol, which (ſaid Vitriol) doth vehemently ſtir up the Body by Vomit, and by Stool (according to the quantity of the exhibited Metals) and killeth the Worms both in old and young folks, and caſteth them forth, and coloureth the very Excrements as black as a Coal; hereby evidently demonſtrating, that being diſſolved and conſumed by the Stomach, it hath brought out, together with it ſelf, the ſlain Worms; Any body may eaſily conjecture that the Acidity of the Stomach was ſufficiently ſtrong to ſet upon the two aforeſaid Metals, being of a Salt nature, and of an eaſie Solution, and to reduce them ſo far as to cauſe them to diſplay their hidden Vertues. But now the Stomach is not endued with ſo ſtrong an Acidity, as to be able to ſet upon and diſſolve Gold and Silver, being Metals as 'twere void of Salt, and admitting no Solution there. Hereupon it uſually happens, that they being uſed inwardly in Medicine, do come away with the Excrements in ſuch form as they were adminiſtred in. Thence do the unskilfull conclude (but falſly) that there are no Vertues in Gold and Silver, becauſe that being brought into a moſt ſubtile Powder, and adminiſtred to the ſick, they are notwithſtanding deſtitute of any kind of Vertues. The reaſon why they do not operate at all is, becauſe the Acidity of the Stomach is not ſufficient enough to work upon them, and to ſtir them up to operation. But being diſſolved by Acid Spirits, *viz.* the Gold by Spirit of Salt, and the Silver by Spirit of Niter, they doe evidently ſhew their Vertues in Medicine, being inwardly taken, and do purge the Body no leſs than Copper and Iron doe, and do withall colour the Excrements black, and kill the Worms both in old and young: Neither indeed will any find a more preſent remedy for killing the Worms, which do oftimes deſtroy many Infants and Children deſtitute of any kind of help, than the Vitriol of Gold and Silver, about which ſhall be written a peculiar Chapter anon.

But foraſmuch as the diſſolved Metals, but eſpecially Gold and Silver, do by their ungratefull ſavour offend the Palate, and dye the Tongue and Lips of a black Colour; Men do abhor to uſe them, although they might be very helpfull in Medicine: But however theſe diſcommodities may be prevented, by rendring the ſaid Metals acceptable to the Palate, and ſo ordering them as that they ſhall no more Colour the Lips, but evidently ſhew forth their Vertues, and perform great matters in Medicine. This now may be done divers ways, ſome whereof ſhall be here deſcribed and declared.

CHAP. VII.

By what means Gold may be brought to ſuch a paſs at that (being inwardly made uſe of in Medicine) it may diſplay its virtues and be ſtirred up to operation by a guider (or leading Card as 'twere) added thereunto.

GOLD being reduced by the way now ſpoken of into moſt tender (Atoms, may be ſtirred up divers ways, ſo as that being inwardly adminiſtred, it may manifeſt its virtues and that notably and efficaciouſly.

As firſt when ſuch Salts are thereunto added as do corroborate the Stomach, and augment its acidity, ſo as to make it ſtrong enough to work upon the tender Gold and diſſolve it, and to turn it into Vitriol in the Stomach, in which caſe my *Sal Mirabilis* is very excellent, but yet other Salts are not to be deſpiſed, to each of which I give the honour due unto them.

Then farther, the ſame may be done when ſuch Mineral Species are added to the ſaid Golden Calx as do by their natural propriety expell by Sweat and Urine: For a Mineral Medicine, as ſoon as ever it begins its operation in the Body, whether by Sweat or by expulſion by Urine, doth alſo ſtir up the Gold to operate, ſo that it works too after the ſame manner as the Medicament adjoyned to it is wont to operate, juſt as 'tis uſually wont to be in ſome kind of Fraternity or Conſortſhip; If one begins to ſing, to dance, to be enamoured with a Virgin, to brawl, or to play, he preſently ſtirs up others to do the ſame, who would otherwiſe have abode ſtill. Now as to the Minerals, amongſt the many inciters there, Antimony obtaineth the firſt place, and doth ſtir up to operate with himſelf any ſuch things as are thereunto adjoined, whether they be Gold or Silver, yea though they be dead. And ſo a Mineral being purgative, or Diuretick, being mixt with Gold, doth perform its operation much more ſafely and efficaciouſly than if it were alone and uſed *per ſe*, inwardly, without any addition of Gold thereunto. For the tender Gold is ſtirred up and driven as 'twere to Cooperate together with the operation of the Mineral Medicament, which otherwiſe, and without ſuch an impulſion and incitement would have remained as dead, and void of any kind of operation, and ſo paſſed forth together with the Excrements.

CHAP. VIII.

A better way of making Gold and Silver living and efficacious.

GOLD and Silver may be made living and efficacious after another and better way and manner, thus. If they be diſſolved in ſuitable Waters, and made Spiritual, and ſo uſed in Medicine, for they are by this means fitted to operate and diſplay their Vertues after their manner, and according to their preparation.

The manner of making ſuch well opened and unlocked Golden Water, I taught ſome years ſince, and publiſhed it under the title of *Aurum Potabile*. For I then knew a way of reducing Gold into a white Water by ſome certain Medicinal Salts, and have it now

now by me at all times, as being better and far more excellent than that former *Aurum Potabile*, and may ſupply the place of an Univerſal Medicine; and that on this account, becauſe it doth operate univerſally in all curable diſeaſes, and doth withall excell all the other Medicaments that I know of in its wholſome operation, for it doth by little and little expell every obnoxious thing out of the whole body. I confeſs that the ſame things are performed by my Golden *Panacæa*, or my Purging Gold, and Diaphoretick Gold, but in ſome caſes I prefer this white *Aurum Potabile* of mine, as I now prepare it, before them, for it hath an inviſible and contrary or different operation from my Purging Gold, or Golden *Panacæa*, which do, for the moſt part, work viſibly. And whereas I have formerly divulged thoſe Medicaments in my Treatiſes, I will omit their ſuperfluous deſcription here, and onely add thus much, That theſe three Medicaments of mine, *viz.* the Golden *Panacæa*, my Diaphoretick Gold, and my white *Aurum Potabile* are ſo abundantly ſufficient both for the preſerving from, and curing of all diſeaſes, that whoſoever will onely uſe them, need not at all any other Medicaments.

But foraſmuch as Men are delighted with variety, and that ſometimes ſuch or ſuch a coloured Medicine, or ſuch an Odour or Savour is far more acceptable, I have judged it worth while to add for the ſake of the ſick yet two or three excellent Medicines more, and ſuch, as to the beſt of my knowledge, were as yet never divulged. 'Tis at every ones liberty to make uſe of ſuch an one as beſt likes him, or now and then to try this Medicine or that, and ſo to make uſe of that which beſt pleaſeth him.

The incomparable *Paracelſus*, the Monarch of Philoſophers and Phyſicians, ſuppoſed, that theſe four Minerals, *viz. Sulphur*, *Mercury*, *Antimony*, and *Vitriol*, did prop up the whole Medicinal Art, like ſo many Capital Pillars, and that by them mought all things be prepared, as were neceſſarily requiſite for any kind of cure. And indeed the thing it ſelf (or the effect) ſufficiently proves the truth of this opinion, and ſo doe thoſe four Minerals themſelves too, if they be but diſſected, purged, and prepared according to Art, elſe they are of no worth, but doe more hurt than good, becauſe if they be not duely prepared, they are not deprived of their Venenoſity, and are not turned into wholſome Medicines. But as for ſuch as are ſet to ſale in our days in the Apothecaries ſhops, they are verily but of ſmall moment. For the Antimony which (being turned into Glaſs) they ſell, hath never as yet admitted of any ſeparation of the good from the evil.

And as for *Mercury*, they turn him into a Sublimate, abounding with Venom, and likewiſe into a red Precipitate, both of which are ſufficiently hazardous both in external and internal Medicinal uſes; For the vulgar *Mercury* never deſiſteth from his malice, unleſs it be exalted by a ſafer and better preparation. It is ſufficient (to ſay) that being prepared after the aforeſaid uſual ways, it ought to be wholly ſhunned, and ſo it will not create any danger.

As for Common *Sulphur*, although it be exalted into Flores, and thoſe exceeding ſubtile too, ſuch as are at this day in uſe, yet ſhews it no wonderfull matters; for there is not as yet made any ſeparation of the pure part from the impure, neither is it thoroughly opened by Sublimation, or rendered ſubtile or fit, to operate upon the Body of Man; for as it was taken in, ſo it paſſeth out with the Excrements: For the Acidity of the Stomach cannot diſſolve it; ſo far is it from yielding to the Stomach any efficacy, for a ſtrong *Aq. Fortis* cannot diſſolve it.

As for *Vitriol*, it yields the Workmen an auſtere or ſowr Oil, and a ſharp Spirit, little availing to Medicinal uſes, this onely excepted, *viz.* the mixing it with cooling Syrups and Conſerves, gives them a gratefull ſowriſhneſs; the which Spirit of Salt well rectified, would perform much better. Hence it comes to paſs, that theſe four Minerals, according as they are at this day uſed, and ſold by the Apothecaries, cannot be accounted for the four Pillars of the whole Body of Medicine, and poſſeſs that title, which *Paracelſus* exalteth them by, unleſs they are prepared after another manner than they have hitherto been

As for *Sulphur*, I bring it to the higheſt purity by a due waſhing, and do by ſuitable and proper Salts turn the ſame, together with Gold, into a clear water, that ſo our Nature may aſſume it to it ſelf, as is to be ſeen in my *Aurum Potabile*.

I draw from Antimony its purer part, and I implant it in exceedingly well prepared Gold, that it may make the Gold efficacious, witneſs my Purging Gold.

Inſtead of the common *Vitriol*, I uſe the *Vitriol* made of Gold, the which is wont to perform ſuch effects in Medicine as the common *Vitriol* never will, as ſhall be taught by and by.

Inſtead of the common and poyſonous *Mercury*, I make uſe of a *Mercury* prepared out of a good Metal, or artificially extracted by a certain Magnet from the beams of *Sol* and *Lune*, as ſhall be taught anon. And this *Mercury* is rightly called the Univerſal *Mercury* of the Philoſophers, becauſe being as yet an inviſible thing, is extracted out of the Air, and made viſible and palpable, and is the effector of wonderfull things in Medicine and Alchymy, as we ſhall hear anon.

But before I proceed to *Vitriol* and *Mercury*, I count it fit, firſt to ſet down a good Medicine prepared out of Silver by the help of Antimony, that ſo every body may know, that even Gold and Silver (how thick and compact ſoever they be) may, by the addition of other Medicinal Subjects, be quickned and ſtirred up, and be brought to ſuch a paſs as to emit their Vertues, as we have afore mentioned more at large. The preparation of this Medicine out of Silver and Antimony is as followeth.

CHAP. IX.

The manner of preparing a good Medicament out of Silver and Antimony.

IN the firſt place prepare out of the Mineral or Oar of Antimony an *Acetum* by diſtillation, according to Art: Then take one part of the beſt Antimony, and two parts of the Calx of Silver; which being well waſhed, mix it with the Antimony, by grinding them very well together, that they may be changed into a grayiſh or ſomewhat a blackiſh Powder. Put this Powder into a ſmall Glaſs, Cucurbit or little Retort, and pour thereupon ſo much of the Antimonial Vinegar as may ſerve to bring the ſaid Powder into a thin Pultis or Pap. Put the Glaſs in Sand, and diſtill off the ſaid Vinegar, this pouring on, and drawing off let be ſo often repeated untill the Antimony ſhall have loſt its blackneſs, and the

Silver its whiteneſs, and be both of them turned into a red Stone, like to *Cinaber*, which is uſually done in the third or fourth Cohobation.

Note well, if ſuch an errour ſhould be committed as that your fire being too ſtrong ſhould when you draw off the *Acetum* melt the maſs in the Glaſs, it would be rendred wholly uncapable of admitting or drinking up the *Acetum*, and then you muſt of neceſſity break the Glaſs and take out the maſs and reduce it again into ſmall Powder by grinding, and repeat the operations according to the aforeſaid way. This Medicament being turned into a red Stone, and ground upon a Marble into a moſt ſubtile Powder, is called by me purging *Lune*, and may be made uſe of in all Diſeaſes as a kind of *Panacæa*, (like as my purging Gold may be) with great fruit and good ſucceſs. For this Medicine of Silver doth operate very gently, expelling all evil humours out of all the Members of the whole Body of Man, and this ſcarce any other Medicine will do ſave my golden *Panacæa* For it leaveth no impurity in the Body, (but expels it) not onely by purgation, but alſo by Sweat and Urine. If you ſhould chance to err and take too big a Doſe, it will alſo cauſe vomiting, but eſpecially with ſuch as abounding with Choler are prone to Vomit. To Infants under four Weeks old may a Doſe be given of about the bigneſs of a Rape Seed, and be mixt in a Spoon with a little of its Mothers Milk, and ſo given them It conſerves them free from the invaſion of the Epilepſie, and frees them. If you find that they are infected with the Small-pox or the like, within a years ſpace, the Doſe is to be augmented, and a fourth or eighth part of a grain may be adminiſtred to them, the which will bring out of the Infants all the impurities by Stool, and preſerve the Face untouched. Thoſe that are from one to two, or twelve years of age, and being troubled with the Worms, do fall into acute Feavers, (and hereby a great many periſh deſtitute of all help) may have the Doſe augmented if need be, and that as their age is, from $\frac{1}{2}$ a grain to two grains, for ſo the Worms will be killed, and the Feaver ſent packing. Nay farther, if the Feavers in Children, be they Boys or Girls, do not proceed from the Worms but from other cauſes, yet may ſo much of this Medicine be adminiſtred to them as may be requiſite to purge and ſweat them, and by this means will they be (without any hazard of their lives) reſtored to their former health. There can ſcarce be found a more profitable and more preſent remedy againſt the Plague and other Feavers in young men, middle aged men, and old men than my golden *Panacæa* or purging Gold, and this ſame purging *Lune* here deſcribed, the Doſe is from one grain to five or ſix grains with reference to the age and Diſeaſe. Such a Dyet is to be obſerved as I have preſcribed in the uſe of my *Panacæa*, *viz.* that the Sick (after the taking of this purging Silver) do abſtain from Sleep and all kind of Food for three or four hours at leaſt, and beware of the cold Air, and have an eſpecial regard to keep a good Dyet. This Medicine of mine, together with my *Panacæa Aurea* (or golden univerſal Medicine) may be ſafely, and without any fear of danger made uſe of in the French Pox, Dropſie, Leproſie, Stone, Gout, and other ſuch Diſeaſes, whatever name they are called by; inſomuch that men may (next their truſt in God) ſafely confide therein. And beſides by this Medicament may very many things be performed in metalline affairs, the diſcovering of which we ſhall at this time omit, contenting our ſelves with having ſhewn the things that appertains to the uſe of Medicine. Furthermore it is likewiſe notably efficacious in curing of external Wounds and Ulcers, provided it be diſcreetly adminiſtred inwardly, and the external defects of the body be kept ſweet and clean. There will in a ſhort time be much more benefit received therefrom, than from ſuch a deal of Ointments and Emplaiſters as are frequently uſed. Praiſe God and give him thanks for ſuch great benefits.

CHAP. X.

The preparation of the Vitriol of Gold and its uſe in Medicine.

DIſſolve Gold in ſome acid ſulphureous *Sal Mirabilis*, and not alkalizated, *viz.* by the moiſt way, paſs the ſolution through a Philter, and abſtract the unprofitable Phlegm ſo far untill there appear a thin skin at the top, which appearing, ſet the remainder in the cold, and you ſhall get a green Stone like to an Emrald. That part of the Liquor which is not ſhot, evaporate again even ſo long till a skin appears, that ſo you may get the reſt of your Vitriol: So all the Gold will together with the *Sal Mirabilis* ſhoot into a Vitriol, reſembling the greenneſs of Graſs, (and ſo green) as nature never produced the like. In this Smaragdine Table are found written (or engraven) many wonderfull things, which will neither be read nor underſtood by every body. I will hint ſome few things concerning it, and ſuch as appertain to Medicine: And in the firſt place, what kind of Vitriol this ought to be, and what notes and marks it is to be diſtinguiſhed by, (as thus) a little of it being rubbed with your thumb, on pure or cleanſed Iron, doth guild it of a golden colour, whereas the common Vitriol makes the Iron look of a coppery colour. This is a ſign of this golden Vitriol's being prepared after a due manner, which ſaid Vitriol will effect thoſe things in Medicine which I am about to aſcribe to it. Beſides, it makes Copper and Braſs ſhew of a golden colour and performs wonderfull things with Mercury, if digeſted with it, in the moiſt way, but for brevity ſake I omit theſe things. For it grows like a little Tree, and ſends forth golden Sprouts.

As touching its Medicinal Virtues ſuch of them as I have found out, are here briefly deſcribed; without queſtion there lie hid in it yet more and more excellent Virtues, which as yet are unknown unto me, but will come to light in proceſs of time.

But the chief efficacy and virtue of this golden Vitriol as far as I know, doth conſiſt in purging and bringing out all evil and noxious humours out of the whole body of Man, and withall in corroborating and ſtrengthening him. And as to this office it outſtrips all other Medicines whatſoever. Nay more, it performs its operation ſpeedily, yea more ſpeedily than any other purge doth. For as ſoon as ever it ſhall be taken into the body it doth preſently begin to work, becauſe the Salt is ſoluble, and therefore ſuch bodies as are not opened, can't at all compare with it, for they muſt neceſſarily lie in the Stomach at leaſt half an hour, or a whole hour before they begin their operation. And becauſe every common Vitriol is a capital enemy to all the Worms of the Belly, and the Feavers ariſing therefrom, wherewith a very many Infants both Boys and Girls do die, void

of

of all kind of help, I do moſt highly commend this Vitriol of Gold to all ſuch Fathers and Mothers of Families, whoſe Children are dear unto them, that they at all times have it in a readineſs, to be made uſe of in caſes of neceſſity. For verily I never found any better or certainer Remedy againſt the Worms than this very ſame, becauſe it not onely kills them, but alſo caſts them out, and doth by ſtrengthening the Sick, take away all the Feavers both of old and young. It is alſo a moſt great ſecret in the Plague, in which Diſeaſe verily, a longer delay or abiding of a Medicine in the Body (without working) is hurtfull. Beſides, it is not onely a certain and ſafe curative Medicine, but likewiſe a preſervative too in the Plague, and in all acute and contageous Feavers, as well of young as old, the like to which is ſcarce, yea very rare to be found. For this Vitriol doth ſpeedily and ſwiftly draw back from the heart every Poiſon, and every burning heat, and being drawn back from all the Members of the whole Body, doth drive it forth by all the Emunctories of the whole Body, but principally by Stool and Sweat. Furthermore, if the Diſeaſe require it, and the Patients ſtrength permit it, it may be adminiſtred in a bigger Doſe, and then 'twill provoke to Vomit, and powerfully expel Choler. It doth in the *Lues Venerea* ſhew it ſelf moſt efficaciouſly virtuous, and powerfully caſts out Tartarous Fluxes and acute humours out of all the whole Body: By which operation it likewiſe brings much help and comfort to ſuch as are troubled with the Stone and Gout, it removes the Epilepſie both from young and old, and frees the Hydropical of the Water betwixt the Skin. And that I may compriſe all as 'twere in one word, 'tis ſuch an univerſal purge as that it roots out of the whole Body whatſoever is found to be hurtfull and offenſive therein. It hath not its fellow as to Remedy the Feavers of Children whether proceeding from Worms or from a corrupted Stomach, the which kill ſuch abundance of Infants of both Sexes, without any help left. Nor do I think that there can be found a better Remedy in the Plague, and in all other acute Feavers which uſually kill Men ſuddenly, than this Vitriol of Gold, if it be but rightly made uſe of. The Doſe is ſmall, and is eaſily made pleaſant to Childrens Palats, by putting a little Sugar thereunto, or ſome ſuch like ſweet things. To Infants newly born, you may give ſcarce an eighth part of a grain, againſt (or to prevent) the Epilepſie, or Convulſions. To ſuch as are from one year old, to 10 or 12 years of age, the Doſe may be one, two, or three grains, according as their age is, the which Doſe may be augmented in ſuch as are older, according as the age and condition of the Sick requires. Where the Diſeaſe is Worms, there the Doſe muſt be ſo ſtrong as not onely by well purging to kill them, but alſo to caſt them forth when killed. For from thoſe ſlain Worms, if they abide in the Bowels, other new Worms uſually breed. I hope that by my thus revealing this Medicament, I ſhall ſo bring it to paſs, as that for the time to come, ſo many Infants both Boys and Girls will not be deſtroyed by Feavers ariſing from Worms, but very many will be ſafely preſerved from ſo immature a death.

But here, ſome or other may ſay or at leaſt think within himſelf, what is the reaſon that I have ſuch an eſpecial regard to Infants and Children, and am ſo very ſolicitous of preſerving them from an untimely end. I anſwer hereunto, that nothing is more neceſſary than to afford ſome comfortable due help to Infants, and poor innocent Babes, who do evil to none, and whoſe loſs their Parents do ſadly brook. For it is certain and without all kind of doubt, that (amongſt Diſeaſes) the Epilepſie or Convulſion is the firſt that ſets upon new born Infants and ſweeps them away. Then preſently follows Meaſels, Small Pox, and ſuch like, and theſe kill not a few. Then comes the Worms, and they cauſe Feavers which afflict them with a continual burning, whereby they loſe all their Appetite to eating, and covet nothing but drink, and the Parents uſe no remedy to ſuppreſs them, being ignorant that ſuch gueſts are lodged there, and do not perceive them when the poor ſick Babes Bellies do not ſwell. But further, when by the ſwelling of their Bellies, they do know that they have the Worms, and though they deſire to uſe ſome Remedies, yet can they hardly make their little ones to take them as being ſo averſe to them. Nay more, though ſometimes they do adminiſter common Worm ſeed, or ſome other Vegetable Powders good againſt the Worms, yet there's ſcarce one in ten that is help'd, and the poor ſick Children grow worſe and worſe: And at laſt when the Diſeaſe hath gotten ſuch head as that the Parents ſee that death is at hand, then is the Phyſician ſent for, who (if he knows the Diſeaſe to ariſe from Worms, and be furniſhed with a good Medicine) doth preſently help the Sick, and free him of the Diſeaſe. But if he be deſtitute of a good Medicine, and attempts to refreſh or cheriſh the Sick with his ſweet Syrups, *&c.* he widely erreth, for by ſuch kind of ſweet Juices he gives Nutriment to the Worms. Neither doth it at all avail to put Linnen Cloaths, dipped in Roſe water, to the Head, thereby to allay its burning heat, and to little purpoſe are the gentle purging drinks preſcribed. For as ſoon as ever the Worms do perceive any thing given to the Sick, which is contrary to them, they preſently hide themſelves (or run to holes) and do wreath themſelves into a kind of Ring, and paſs out with the Excrements. But if they perceive any ſweet thing which is pleaſant to them to be given to the Sick, they do receive their nouriſhment thencefrom and remain alive. And if by ſome hap or other it doth ſo chance that one or more is hurried away with the Excrements, yet the reſt of them remain unhurt, and the Diſeaſe is not taken away, but prevaileth more and more, and at laſt deprives the Sick of Life. He therefore that endeavoureth after the happy curing of ſuch Feavers as ariſe by reaſon of Worms, muſt of neceſſity (in defect of this golden Vitriol) give his Patient ſuch things to drink for three or four days as do cauſe a bitterneſs in the Stomach. And although bitter things are unpleaſant to the Palate of poor Sick Infants, yet are they enemies to the Worms, and do kill them. Such bitter things therefore being drunk for three or four days, the Worms do ſometimes in ſome Sick Children die the firſt or ſecond day, but in other ſome 'tis the fourth day e're they die.

Now then as concerning ſuch bitter Medicaments, which I here write of, that they may not be bitter in the Mouth, but be made ſo in the Stomach, I ſay, that the Metals are ſuch, and eſpecially Iron, Copper, Gold and Silver, the which being diſſolved do obtain a very bitter and ungratefull Savour. But the reaſon why Gold and Silver being taken into the body, when they are filed and ground moſt exceeding ſmall, do not operate any thing at all, comes from thence, *viz.* becauſe the Acidity of the Stomach

mach is too weak to ſet upon them: And therefore 'tis neceſſary that they be firſt converted into Vitriols, if you would have them operative in the Stomach, as I have taught you concerning Gold. But foraſmuch as every Body cannot be Maſters of ſuch a golden or ſilver Vitriol, it ſeemed expedient to me to reveal to the poor, a certain and never failing Secret, by the help whereof the Worms both in old People and young are killed.

It is not unknown to Phyſicians that every common Vitriol wherewith Dyers uſe to dye their black Colour, doth (being adminiſtred to young People) kill the Worms and caſt them out too. But becauſe of its unpleaſant and odd taſt 'tis a hard matter to make Children take it. But now if you do a little more accurately examine the properties of common Vitriol, you will find it to be nothing elſe but a mere acid Salt, by which Iron or Copper, or both together are diſſolved in the Earth, by nature. If now we are ſo minded, we can alſo make a Vitriol in the Stomach, which will be equally as operative as that which is made by nature and taken in at the mouth, and 'tis done thus. If we give moſt ſmall filings of Iron or Copper to little Infants in a due weight, theſe now may be eaſily adminiſtred unto them, as containing no ungratefull taſt. For, being reduced into thin or curious filings, and being a metal eaſily admitting of Solution, as ſoon as ever it comes into the Stomach, the Acidity of the Stomach doth meet with it, by which 'tis eaſily diſſolved, and turned into a Vitriol, and ſo endued with the very ſame operation as that is, which is prepared in the Earth by Nature.

But you are here to obſerve the difference that is betwixt the filings of Copper and Iron, and that is this, the Copper works ſtrongly, and the Iron much milder. Beſides the Copper makes the Stomach vomit, but the Iron cauſeth no Vomits, and doth very rarely diſturb the Stomach, and when it doth, 'tis onely in this caſe, *viz.* when 'tis adminiſtred in too great a Doſe. Therefore amongſt all ſuch Medicaments, Iron is the beſt, the ſafeſt, and the leaſt coſt, though to proud men it may appear ſufficiently vile and baſe. Nor is it to be queſtioned but that the brethren of ignorance will entertain it with deriſion, and ſay; if *Glauber* knows no better remedy for the Worms than this, which conſiſts of the groſs filings of Iron, he had done a great deal better to have kept it onely to himſelf: And if Iron abounds with ſuch Vertues there's no reaſon for him ſo to praiſe his pretious Vitriol of Gold with ſuch a deal of commendations. To this I anſwer, that my aim in teaching the preparation of the Vitriol of Gold is not directed for the Worms in Children ſo much. But I have added this remedy of Iron to the deſcription I have made of the vertues of the golden Vitriol, to this end, that I may demonſtrate it ſelf alſo is ſo excellent a remedy againſt Worms, and for the removal of thoſe Feavers as are cauſed by them. But becauſe their cure can be more eaſily perfected (as we juſt now ſpake about the filings of Iron) 'tis worth the while to have regard to the way that is moſt compendious. He that pleaſeth may adminiſter of the Vitriol of Gold, but I commend Iron to ſuch as are poor, for they may have that even every where. There is no Village ſo ſmall but hath a Smith living in it, who can when your neceſſity requires ſupply you with ſome filings of Iron.

But that my mind may be fully underſtood, I judg it neceſſary yet more clearly to give you a Declaration of this thing, *viz.* in what manner and with what conveniency the filings of Iron may be adminiſtred to the ſick Infants. And 'tis thus done. Whilſt the Infants are unweaned, ſome Grains of the ſaid filings from 2, to 6 or 8 Grains, may be mixt with a little Sugar and put into their mouths, and then preſently give them ſuck, that ſo thoſe filings may be ſuckt down together with the Milk into the Stomach. Do this three days together and the Worms will be deſtroyed, and the Feaver vaniſh. But if any body will make uſe of any other Vehicle than what is the Child's ordinary food, he may do ſo if he pleaſe. But as for ſuch as do not ſuck, but do drink out of a ſucking Bottle according as the uſual cuſtom is, you may eaſily give it them, on this wiſe; Put a little into the Bottle and ſtop the hole of the Bottle with your finger, and ſo turn it upſide down that the filings may ſlide down to the hole, and ſo let the Infant ſuck it down, and 'twill paſs with the drink into the Stomach. To ſuch Boys and Girls as are bigger, and have more underſtanding, it may be given eaſily and any way you pleaſe, onely telling them that they will be reſtored to their former health. To ſuch as are 10 or 12 years old a quarter part, or an half of the weight which we uſually call Quintlein [from 10 to 20 grains] may be given ſafely, for 3 or 4 days. But in the mean while let not the meats they uſe be of hard Concoction, but made of Pottage, Prunes, and ſuch like mollifying and looſening things, which may help forward the operation of the Iron, and ſo the ſick will become the ſooner well. I could not refrain from highly commending to all tender Mothers that love their Children, this moſt ſafe and not at all coſtly Medicine againſt all the Feavers proceeding from Worms, which do kill ſo many poor little ones deſtitute of all kind of help. Let no body matter its vileneſs, but rather think with himſelf, that God hath alſo endowed vile and contemptible things with great vertues. Verily this Cure, and thus taking away the Worms, and the Diſeaſes ariſing therefrom, is ſtrongly founded on natural reaſons, or arguments. For ſeeing that the common Vitriol is a Poyſon to Worms, but becauſe of its bitter and nauſeous taſt 'tis exceeding unpleaſant to the Palate, they do very well, that ſubſtitute Iron as being void of all Savour, in the room of the common Vitriol, that ſo being given to their Children it may be converted to Vitriol in their Stomachs, and ſo kill and drive out the Worms. I my ſelf have tryed many experiments about the Cure of the Worms in my Children, but never found any thing ſafer and better than contemptible Iron.

A Story of a Child that had Worms.

I Will tell you an inſtructing Story, concerning a great and eminent man's Child in ſuch a Diſeaſe proceeding from the Worms, in which my ſelf was concerned. A certain rich man did on a time conſult with me, (or ask my adviſe) about this Child's Diſeaſe. I gave him as much filing of Iron as was ſufficient for one Doſe, for his Child to drink. It ſeemed an abſurd thing to the good man, to give an Infant filings of Iron, upon this conceit he omitted to uſe it, and having called two Phyſicians he ſhews them the filings, and askt them whether they would adviſe him to adminiſter it to his Infant. They earneſtly diſſwaded him from uſing it, ſaying that if he uſed it his Child would be killed, and that it was a

Medicine

Medicine onely fit for curing of Horſes, and that they would preſcribe a far ſafer and better one. They ſaid there was no danger in the Child of Worms, and therefore they preſcribed it a cooling and purging Syrup, thereby to take away the Feaver, and they alſo added confections of Pearls, with other cooling Waters. Death deſpiſed theſe kind of Potions, and ſnatcht away the Infant: The Child being dead, there crept out of his mouth great Worms, and clearly teſtified to the Parents their unſeaſonable rejecting my adviſe, haply becauſe the Medicine I preſcribed was not coſtly, but prepared out of a vile Subject. But it repented the Parents too late: The Mother coming afterwards into the Houſe of a certain Neighbour, gave that filings which I had delivered them, unto an Infant troubled with a Feaver and the Worms, who upon the taking of that one doſe onely became better, and by little and little returned to its former ſtate of health, I was willing to ſet down this hiſtory to the end that I might demonſtrate, that vile and abject things are many times capable of performing more than Pearls and precious Stones can.

And ſo I conclude this ſo very neceſſary a diſcourſe concerning Worms, and the Feavers ariſing from them, whereby great multitudes of poor Infants are deſtroyed. I hope that no body will take it amiſs that I have made ſo-long a diſcourſe concerning Worms. For I judged it neceſſary to ſhew the cauſe from whence ſo many little ones do dye in the flower of their Age. He that refuſeth to believe what I ſay, let him try the thing by his own loſs.

CHAP. XI.

Of Mercury and its excellent Vertues, both Medicinal and Chymical, I mean not the common and well known Mercury, but the Mercury of the Philoſophers, the which is extracted by the Vulgar and well known Gold and Silver, (but they are to be firſt rendered Magnetical) out of the Beams of the ſuperiour Sun and Moon, by the help and aſſiſtance of the Air.

IT is well known to thoſe that have looked over the manifold Writings which are extant at this day, how many and how great ſearches have been made, and how various and many opinions there have been abroad for many Ages, concerning the Philoſophers Mercury; as many men ſo many minds, one man concludes with himſelf to prepare it out of ſuch a matter, another out of ſuch a thing, and 'tis hereby come to ſuch a paſs as that, there's no more faith left for any ſuch Mercury, and 'tis lookt on as if there were no ſuch thing in nature, nor is at preſent any where extant: Becauſe ſo many thouſands of men have been occupied in the ſearch thereof, and ſo moſt exceedingly ſmall a number have been maſters thereof.

Others have opinionated, that the moſt pure ſubſtance is to be extracted out of Gold and Silver, but not in the form of a running Mercury, but in a watery form, and to be coagulated and fixed by the help of the Fire into a medicinal Stone.

Otherſome have perſwaded themſelves that Gold and Silver being ripe and fixt, are no ways fit for ſo great a work, but 'tis rather to be ſought for in ſuch Subjects as never aſſumed to themſelves any ſhape, but do as yet lie hidden in that great and univerſal *Chaos* the Air, becauſe they ſaw that the life of all things lay hidden in the Air, and that out of it every Creature of God doth daily and without intermiſſion attract it unto it ſelf after a magnetical manner, both for its own life and augmentation, and that it is ſo too with the ſeeds, abundance of them (and they moſt different ſorts too) being ſown in the ſame Earth, do each of them (according as its nature and property is) acquire to it ſelf both life and augmentation thencefrom, *viz.* the Air.

So likewiſe may it be brought to paſs, that even the Metals may according to their nature and propriety extract their encreaſe out of the Earth or Air, knew we but how to get the true Seed, or true Magnet which might get out that augmentation. For why ſhould not God have as well given a Seed to theſe his Creatures for their encreaſing, as well as to the other Creatures? So then there are very many ſundry Opinions ſprung up, concerning the *Mercury* of the Philoſophers, and very many men have to their uttermoſt ſearched after it, yet but a very few have obtained the ſame. Though it be thus, yet the fault is not to be imputed either to Nature or Art, but to the ſearcher after it, becauſe he errs and ſeeks not in the due place. Verily I did very many years ago exceeding ſtudiouſly apply my ſelf to the ſearch of ſuch a ſpiritual and Gold and Silver attracting Magnet, but I could not hitherto attain to the true Scope, until I at length by chance found that a true living and running *Mercury* might, by the benefit of Art, without any Addition of Mercurial things, be extracted out of the fugacious and imperfect Metals, ſuch as are Lead, Tin, Bizmuth, Zink, and Antimony. And although I had read many Philoſophers affirming this thing, yet did I always doubt of the ſame, and indeed not without cauſe; for in my youthfull days, ſerving a man of great note in Chymical Labours, I tried in two years ſpace two hundred ways of making the *Mercury* of *Saturn*, and not ſo much as one of them ſucceeded. Now my ſaid Maſter was ſtirred up to the ſearch of this Saturnine Mercury upon this occaſion as follows. He had ſome familiarity with many noble Perſonages that were alſo addicted to the ſtudy of Alchimy: One of them knew how to make running Mercury out of Lead, and to turn it into the beſt Gold, and he ſent unto my Maſter one lot or ſomewhat better of that ſaid *Mercury*, together with the way of turning it and fixing it into Gold. We ſet about the work and it ſucceeded to our deſires, and yielded us as much Gold as there was *Mercury* ſent us. This hoped for ſucceſs did ſo edge on my Maſter, that he could not reſt till he had obtained from him that knew it, the manner of making this Saturnine Spirit. But as often as ever we tried the operation according to the way preſcribed us, both our hopes and labour were in vain. And then my ſaid Maſter readily granted, that we could not effect it. Hereupon it was that he ſought all abroad with the greateſt diligence, and had got ſuch abundance of proceſſes and operations, that two years did ſcarce ſuffice me to try them all; though there was not ſo much as one amongſt them all that anſwered our wiſhes, but all our Labours were in vain. Upon this ſcore, I could believe neither *Baſilius* or *Paracelſus* when I read in them, that Gold and Silver might be reſolved into true and running *Mercury*, ſeeing that the bare turning of unripe Lead into *Mercury*, did coſt me and others ſo great Labour and Pains, and yet we could not obtain it neither. Whereupon I fell into this opinion, that the Philoſophers pointed

at ſome other thing, by their running *Mercury*: And I did ſo long adhere to this opinion of mine, untill I chanced to light on the making of a running *Mercury* out of Lead, and I have ſeveral times repeated the operation with the ſame ſucceſs.

I have likewiſe revealed it to others, who have alſo done the ſame, but onely in ſmall quantities hitherto. But ſome of them have beſtowed much pains about it, and to prepare it in a greater quantity; and that principally, becauſe 'tis certainly manifeſt that no ſmall benefit lies herein hidden. Nay if it were no otherwiſe profitable than barely thus, that it may be turned into Gold, and of this I am certain, ('twere worth while) For if the ſaid *Mercury* be but rubbed upon a piece of Gold, it makes it white, and being then put upon the Coals, it ſeparates indeed from it, but yet leaves it tinged of a higher and deeper Colour. If this Labour be ought repeated, the Gold will become weightier. And hence may eaſily be conjectured, that if it were adjoyned to a pure Golden Calx, it would in a ſhort ſpace of time eaſily paſs into good Gold. Neither is there any doubt, but that if any one did but know the manner of rightly handling ſuch a *Mercury*, he would obtain ſome notable thing out of it, becauſe all the Philoſophers do in their Writings promiſe ſo much good of *Saturn*. They generally affirm that Lead is (inwardly) far beyond Gold. How many Philoſophers are there that teach the preparation of the univerſal Work from thence? See the Univerſal Work of *Iſaac Holland*, *Paracelſus* his Heaven of Philoſophers, The great and ſmall Countryman, *&c.* Many do expreſly write, that all things which the Philoſophers do ſeek for, are to be found in Lead; Hereupon they called it Leaprous Gold. And ſome Philoſophers do write, that in *Mercury* are all things that are ſought for, haply they mean not the Common, but ſuch an one as is drawn out of Metals. But we'll even let paſs this *Mercury* of *Saturn*, and ſee whether or no we cannot find a better *Mercury*, and ſuch a one as is of greater moment. In the mean time the ſaid *Mercury* of *Saturn* will fly about, and bring good news to the Lovers of Truth, *viz.* that *GLAUBER* is now in the way, to triumph, by the help of God, over all his Enemies.

We will therefore go on to ſearch out, whether or no there is not another and better running *Mercury* than that to be found, which comes out of Lead. When I did ſomewhat more accurately ſearch into Nature's ſecrets, I clearly ſaw, that all things which live and doe in growing take an encreaſe, do proceed or come forth by the Sun's operation, inſomuch that ſuch fruits as are nearer hereunto are the more excellent, and by how much the farther off any are from it, by ſo much the vilder be they. As for example in Wine; by how much the nearer it is to the Sun, ſo much the nobler is it; and by how much the farther it is from it, ſo much the vilder is it.

The ſame may be obſerved in the generation of Metals, *viz.* that in the hotter regions there is a greater quantity of Gold, and of Silver, than in the colder Countries. This is well known, and out of all diſpute: So then when I ſaw that the hot beams of the Sun, together with the cold and refreſhing light of the Moon, did not onely ripen Gold, but alſo thoſe excellent Wines, and the beſt taſted Fruits, yea and the moſt contemptible Herbs, and that it gave to all things their moſt acceptable Savour; well did I conclude, that if a convenient Matrix, or ſuitable Magnet were expoſed to the hot Sun-beams, and to the cold light of the Moon, that might day and night receive their Operations; It could not poſſibly be, but that the Seeds of thoſe (*viz.* of *Sol* and *Lune*) inſinuating themſelves into ſuch a Magnet, will paſs into moſt excellent Fruit, and obtain a perfect maturation. I did once make trial to ſee whether it would be ſo or no, and having artificially prepared Gold and Silver, opened them, and brought them to a Magnetical attractive vertue; and being well mixed, I expoſed them to the *Sun* and *Moon*, to ſee and try what would proceed thencefrom. Then afterwards, ſuppoſing them to have ſtood long enough at the *Sun* and *Moon*, I put them into a ſmall Glaſs Retort, and placed it in Sand, and ſeparated (by diſtillation) all the moiſture from the Golden and Silver Magnet, that it had attracted from the Air. I got indeed a ſweet Water, but yet not without Vertues. But having adminiſtred a ſtronger fire to this Magnet, I drew therefrom an aſtringent Liquor, reſembling a golden yellow Colour, and like to Gold. I again expoſed the ſaid dried Magnet to the beams of the *Sun* and *Moon*, that it might by them be impregnated, and that I might ſee whether or no a Second, and more Births would be produced, anſwering in all reſpects to the former. I doe not doubt of them, I confeſs but that they will be of a like property and nature as their Father and Mother are, or indeed be more fair and excellent than they be: For that firſt-begotten off ſpring brought with it ſelf into the World a far more excellent fairneſs than its Father had.

Farther, bringing this Birth of *Sol* and *Lune* to a more accurate trial, that ſo I might find out its vertues and efficacy, I firſt of all perceived, that there lay hidden therein (though as yet ſo Volatile) a Medicine of great moment. And dealing with it upon a certain time, and putting a little of it by chance upon Gold, I found that it made the Gold white; and rubbing the ſaid Liquor many times upon the Gold, it did at length produce (or ſhow forth) the live *Mercury* that lay hidden therein, which ſaid *Mercury* thus living and viſible, I extracted out of this ſame Liquor; but it is better not to vivifie it, but to take it as 'tis born, and ſo fix it and make it conſtant. And now, I ſuppoſe, that ſuch a *Mercury* as is extracted out of the Air, by Gold and Silver, being not ſo much corporeal as ſpiritual, is to be accounted of as the true *Mercury* of the Philoſophers.

But if now any will object and ſay, that this *Mercury* doth not proceed forth from the Air, or that it is not extracted out of the beams of *Sol* or *Lune* by the Magnetick Gold and Silver; ſuch a one may even ſay what he pleaſeth, but in the mean time he will not get the things he fiſheth for. Beſides, I do not matter it ſo much, *viz.* whence it ariſeth, provided I can obtain the ſame; If it did proceed out of the Gold and Silver, it were not therefore to be rejected, but it would be altogether better than that which is made out of groſs Lead, nay haply it might become a Tincture, did but any one know how rightly to handle it.

It is a uſual Proverb, that *the Apple falls not far from the Tree*, and each thing follows the Seeds of its proper and peculiar nature. *By how much the nobler the Tree is, by ſo much the more worthy is the Wood thereof. The younger ſort ſing over the ſame Song as the old ones doe.* Now theſe Proverbs do declare, that the Fruits are ſo much the more excellent, by how much a better nature the Tree is of, and this is a ſure rule: And therefore it neceſſarily follows, that ſuch a *Mercury* as is drawn by Gold and Silver out of the Air,

Air, or doth proceed barely from Gold and Silver, muſt needs be far better than that which hath its riſe from Lead: And herein I acquieſce. Let every one take from thence what beſt likes him, I was willing to leave to ſuch as come after me, thoſe things which I met withall of ſo great moment.

And as concerning the Medicinal Vertues of this Golden *Mercury*, I doe give this caution about it, that if it be uſed as it came over at firſt in the diſtillation in Medicine, becauſe 'tis as yet immature, and but newly born, it may work too ſtrongly upon the Body of Man. It is therefore better that it be fixed with ſome corporal well-opened Gold, and ſo 'twill effect thoſe things which a Univerſal Medicine is onely able to perform. I confeſs that hitherto I have not brought it to any conſtancy or fixity, becauſe I have not had time of rightly handling it: In the mean while there are others that will ſet about this labour, and will in due time manifeſt more things concerning it. Let every one be content therefore with this preſent diſcovery, *viz.* that a truely live and running *Mercury* may be extracted, not onely out of the ſoft and volatile Metals, and conſequently unripe ones, but alſo out of the ripe Metals. And ſeeing that moſt Men doubt much of the truth of ſuch a thing, I could not omit the affirmation of the ſame, as being a moſt true thing: He that liſteth may make trial of the ſame. 'Tis enough for me to have ſhown you the way. Let others likewiſe publiſh ſomething, that ſo the truth which hath been ſo long ſuppreſt hitherto, may at length ſpring forth out of the darkneſs into light.

And now, at laſt, let's come to treat of Wine, and examine what an harmony and familiarity there is in it with Gold and Man.

CHAP. XII.

Sheweth how great harmony, familiarity, and love, there is in Wine, with Mankind and Gold.

IT is evident, even from the Writings of all the Philoſophers, that Wine and Gold is a wholſome remedy for Mankind, but yet not in ſuch a groſs ſtate, and without any preparation, as they come forth out of the Earth, but they are to be deſtroyed, and their moſt pure parts to be extracted, and again conjoyned. To obtain this knack, there have been uſed many *Menſtruums*, and one more excellent than another. The common Spirit of Wine hath no familiarity at all with Gold, becauſe of its unripe and combuſtible Sulphur, from which Gold is wholly averſe, as being its enemy. This thing I have in ſeveral places of my Writings made mention of, and have alſo taught it in this very Treatiſe, that Gold being diſſolved in *Aq. Regia*, and precipitated with the Water of Tartar, yields moſt curious fine Atoms, which cannot be done any other kind of way. For the common groſs Wine, and the common ſulphureous and unripe Tartar are enemies to the Gold, the which is evidently manifeſt by this preparation of the moſt ſubtile Calx of Gold, cauſed by the pouring of the Water of Tartar thereunto, whereby 'tis precipitated unto the bottom.

The certainty of the truth of this thing may be thus tried, if a little Gold being diſſolved in *Aq. Regis* be put into a glaſs full of Rheniſh, or any other ſharpiſh Wine: The Gold will be preſently precipitated, by the Tartar which is in the Wine, into a tender and ſhining Powder, but it will not in a moment of time ſettle to the bottom, but by little and little. And yet if you put the Wine in a Veſſel over a fire of Coals, and boil it, then will it be ſpeedily precipitated. From whence 'tis evidently apparent, that Wine being as yet not at all ſeparated from its impurities, doth as it were differ from Gold, with a deadly hatred, and yet carries hidden in its bowels a ſubſtance moſt friendly to the Gold, the which will, in the end, manifeſt it ſelf ſo to be, when the more groſs parts are ſeparated from the more ſubtile.

Baſilius teacheth its preparation by a peculiar proper inſtrument, wherein (as I judge) the Spirit of Wine is to be kindled and burnt, that ſo by the burning up of the Sulphureity, the Mercurial Salt may be ſeparated and caught in a cold Receiver. And with this very Salt (ſaith he) may a Tincture be extracted out of Gold, which ſeems very probable to be ſo, if one could but get or catch that ſaid Mercurial Salt. Many indeed have attempted this labour, but perhaps not a man hath found an anſwer to his expectation, where the defect lies, God knows.

Others have mixed Gold with *Alkalies*, and have taught the extracting of a Tincture by an Alkalizated Spirit of Wine, which way, though they may doe ſomewhat, yet it is not the genuine way.

Alſo ſome have by diſtillation gotten a certain fiery Spirit out of Tartar, and therewith endeavoured to conquer Gold. Here indeed is an appearance of ſome kind of poſſibility, but yet this Spirit is not to be attempted for that, which unlocketh all the bowels of the Gold; and that for this reaſon, becauſe it doth as yet abound with combuſtible Sulphur, to which Gold is a bitter enemy. But now if you would duely joyn Gold with Wine, then muſt all the combuſtible Sulphur (of the Wine) be firſt ſeparated from its Mercurial part, and the Mercury of the Wine is to be brought by diſtillation into a notable fiery Spirit; if this be not done, there will be no great matters effected with it.

CHAP. XIII.

By what means ſuch a Spirit of Wine as doth aſſociate it ſelf to the Gold may be prepared.

WIthout doubt many ſuch as perceive that there is a poſſibility of preparing ſuch a Spirit will be moſt vehemently deſirous to know the operation, how 'tis to be done. But it is even a wickedneſs to caſt ſuch a great Secret before the unworthy and impure Swine. It therefore will be ſufficient to ſhew both that it may be done, and after what manner; the reſt to be left to God.

But that the ſtudious Artiſt may not be wholly affrighted or kept back, I will here declare, ſo much as may be ſufficient to any one that is verſed in the Labours of the Fire, for the acquiſition of ſo great a Spirit: But yet with this proviſo, that he make uſe of Patience in his operation, for this work is not to be diſpatched in a day, like as that labour which in one days diſtillation affords a Spirit out of the Lees of Wine, or out of Tartar. No! But the manner of the work is thus:

Take white or red Tartar (for both of them being well mundified, are as good one as the other) diſſolve it in Water, and ſeparate all its groſs Sulphur by

by a certain precipitating matter. This impurity abiding in the Water, is to be ſeparated from the precipitated Tartar, by pouring out the Water, the which (Tartar) remains in the bottom like a ſnowy Sand, and is to be well purged by reiterated waſhings with Water, ſo long untill (all the impurities being well ſeparated) the Powder it ſelf becomes like to the white Snow. Now although that this Tartar be moſt exceeding white, yet doth it contain as yet many Sulphureous Fæces; which being black, do never ſuffer themſelves to be ſeparated by any Solutions and Coagulations, but it is neceſſary that they be precipitated by a certain precipitating matter. Therefore let that Tartar be again diſſolved in pure Water, and be precipitated, the which Solutions and Precipitations let be ſo often and ſo long repeated, untill there appear no more black Fæces. This moſt pure and moſt acceptable Tartar melteth in the mouth, and doth almoſt in the manner of other Salts eaſily admit of Solution in cold water. Being brought to this paſs, it is rendred fit to be dealt withall in the following manner.

Diſſolve ſome pounds of this pure Tartar in cold water, ſo as to make it ſufficiently acid. Put this Solution in ſome warm place, or rather in Horſedung, or in a warm Balneo, that the Tartar may begin to putrefie and loſe its acidity, and get a kind of ſweetiſhneſs, which before it will come to be, there is required the time of ſome months. After it hath thus putrefied, and loſt its acidity, all the unprofitable Water is to be evaporated by a Balneum, untill it become a thick and black Juice like Honey; the which being ſet in the Glaſs in Sand, and being urged with a ſtronger fire than was made in the Balneo, will yield a fiery Spirit, and ſuch an one as will mix it ſelf with Gold diſſolved in Spirit of Salt, and will ſeparate the purer parts by digeſtion, and draw them to it ſelf, from the more groſs parts, and ſo will perform its office in Medicine even to moſt high admiration. For any one may eaſily conjecture that the moſt pure parts of Wine, Salt, and Gold will operate no evil effect.

What it will perform in Metalline affairs, I doe not as yet know; But, without queſtion, if it be rightly adminiſtred, and duely made uſe of, it will play its part very notably.

This operation before ſet down, ſeems eaſie to be done, if barely looked on outwardly, but there's more labour and trouble in it than one would imagine. Such as have not the gift of patience, and knows not what belongs to patient working, may forbear this labour. For the putrefaction proceeds on very ſlowly, and there is required the knowledge of a matter precipitating Tartar, without which it will never ſuffer it ſelf to be precipitated and purged, 'tis an hard thing to find, but he that knows it, it renders him all his labour facile and eaſie. Any impure Tartar, whether it be white or red, may be ſo waſhed in one or two hours ſpace, and ſo purged, that (loſing nothing ſave its Fæces) it will become moſt white, and much more apt for many operations. But my time will not admit of treating farther of theſe affairs, it may (God willing) be done afterwards in another place.

However, thus much I will yet add more; That if Spirit of Wine brought to the higheſt purity, ſo as to retain no filthy ſavour or odour, be in a due quantity conjoyned by the help of common Water with this excellently well depurated Tartar, there will reſult from them two a drink of a moſt excellent ſavour, like to natural Wine, and may be uſed inſtead of wholſome Wine. This would be a moſt profitable thing for thoſe that travel, had they but that Spirit of Wine, and that ſo excellently well prepared Tartar. For there is Water to be had in all places, and ſo they may at all times and every where make themſelves good Wine, yea ſo good and ſo ſtrong as they pleaſe, according as they add more or leſs of that Spirit and Tartar.

N. B. This Art would be very profitable for the cold Countries, in which Countries, in the want of Spirit of Wine, becauſe no Wine grows there, the Spirit of Corn will perform the ſame. The chiefeſt knack is, to be furniſhed with that Tartar, which by an eaſie Solution enters into (or is diſſolved in) the Water. But this is a buſineſs of a greater moment than to be divulged. I have already opened to ſome the manner of preparing ſuch a Tartar, who make it in plenty, and ſo any one may eaſily get from them as much as they ſhall need.

Beſides the uſe of that kind of Tartar, conduceth to the accompliſhing of many other things, but not to be ſpoken of, leſt it ſhould prove a detriment to ſuch as know it. But I doe here truely and ſincerely affirm, that whoſoever he be that can without waſt and coſt ſo prepare the common vulgar Tartar, he will be hereby able to get his food and rayment, and other neceſſaries for life, whereſoever and in what Country ſoever he ſhall abide. This thing will in proceſs of time have a farther progreſs, and many will by the benefit thereof live more happily, and perform things incredible. I have made a beginning, and the Mice ſhall never gnaw off what I have here written, but contrarily my Succeſſors ſhall enjoy the ſame to God's glory, even to the Worlds end, and will in the firſt place thank God, and next him, me, as being the Authour and Revealer of the ſame. I could reveal many moſt profitable things that might be done by ſuch a Tartar, were it not for injuring ſuch as get their living by it, and which for certain cauſes are not at preſent to be mentioned. I have ſaid enough to Wiſe men, and as for deriders and mockers, I have ſaid too much, for they will ſay all are Lies, becauſe they know not how to doe thus.

As to what appertains to the uſe of this here deſcribed Liquor, conjoyned of Gold, Tartar, and Salt, it may ſerve inſtead of *Aurum Potabile*, in all Sickneſſes, and may be profitably adminiſtred, in corroborating the vital Spirits; for it doth not diſcover its Vertues by a remarkable and viſible operation, but it ſtrengthens the Body, and doth very gently drive out Urine and Sweat, and ſeldom is it that it provokes to ſtool, unleſs it be given in a ſtrong Doſe. The Doſe is from one, two, three, ſix, nine Drops, even to a Scruple, according as the Sick is, in Water, Wine, or Ale, or other Liquors, in a Morning upon a faſting Stomach, and at Evening after Supper, for ſome days together. It keeps the Body open, and ſtrengthens the Brain, and all the Members. But principally (before the uſe of this Liquor) the Body be well purged with good purging Remedies, ſuch as are my purging Gold, and purging *Lune*, becauſe then this Medicine of the ſaid Golden Liquor operates far better, and more profitably. In uſing it, you are to obſerve whether or no the Excrements become black, if not, the Doſe is ſo long to be augmented or continued untill the Excrements that come away be of a black Colour. Moreover, the Diſeaſe decreaſing, the

Doſe

Doſe is to be leſſened by little and little, according as neceſſity or the diſeaſe requires.

Theſe things I thought good, at this time, to publiſh in the Fourth Part of my *Spagyrical Pharmacopæa*. I entreat that every one would take in good part theſe few Medicinal Secrets, but of very wide and large extent. And, God willing, my Third Century will ſhortly come abroad and preſent you with a Manifeſtation of more excellent Medicines, and other profitable Secrets.

The End of the Fourth Part.

THE FIFTH PART OF THE Spagyrical Diſpenſatory.

Diſcourſing of the true Univerſal Medicine, and of thoſe moſt Eminent *Arcana's*, as well Univerſal as Particular, which are hitherto unknown unto the World; by the help of which unheard-of and almoſt incredible Operations may be effected, not onely in Medicine, but alſo in Alchymy. Propoſed by way of *Queſtion* and *Anſwer*.

Queſtion 1.

WHether or no it is a thing poſſible in nature for ſuch a Tincture, or ſo Univerſal a Medicament to be prepared, as by the help of which, both the Bodies of Men and Metals may be promoted unto an higher, better, and more noble Degree or Eſſence?

Anſwer.

It is not at all to be doubted of, for, as well the Authority of ſo many and ſo great Men (who confeſs by their Writings which they have publiſhed that they have made the ſame) as daily experience demonſtrates the ſame to be a truth, void of any doubt.

Queſtion 2.

If thoſe things which ſo many illuminated Philoſophers have written of this Univerſal Medicine be true; how comes it to paſs, that though almoſt the whole World ſearch after the ſame, yet ſcarce one of ſo many thouſands is maſter of the ſame, and that the greateſt part of the inquiſitors after it, waſt their Eſtates in the ſearch to no purpoſe?

Anſwer.

The Art is not to be blamed, becauſe of the fruitleſs endeavours of ſo very many men that ſo greedily gape after ſo great a treaſure; but the fault is to be imputed to their own ſelves, for they are hereto driven and ſtirred up by their inſatiable covetouſneſs and unjuſt intentions, to make their ſearch after ſo divine a gift, and their deſign is to ſcrape up to themſelves, by the help thereof, great Riches and Honours, little thinking that God always hath and ſtill doth beſtow his gifts upon ſuch as are upright and ſincere, and who doe not onely daily pray unto him for the ſame, but do alſo ſearch after them with unceſſant Labours. This the Apoſtle himſelf doth witneſs in expreſs words, ſaying, *It is not of him that wills, nor of him that runs, but of God that ſhews mercy*. And yet the extreamly blinded World believes it not, nor propoſeth unto it ſelf any other Scope than the ſcraping together of Gold and Silver right or wrong, and fain would as it were wreſt this ſo great a treaſure out of the hands of God; and having gotten it, add fewel to their malice, pride, and impiety; And ſo by this means, more nearly approach (even in this life) to the Devil the Father of all wickedneſs, and be at laſt plainly like him. And this now is the primary and principal cauſe, why ſo very many as are

buſied about the ſearch of ſo great a treaſure, do loſe both their labour and expence.

Queſtion 3.

But are there no other impediments that preſent themſelves, and which may be an hindrance and bar even againſt pious men too, and ſuch as lead a blameleſs life before God and Man, whereby they cannot have admiſſion to the knowledge of ſo great a Medicament?

Anſwer.

Yes verily, there are exceeding many, or almoſt innumerable impediments that lie in the way, and ſhut up the paſſage even againſt the approaches of pious men to ſo great a work, though they attempt the ſame too with a good intention, and do ſue unto God by their daily prayers, and make their ſearch with a moſt diligent meditation, and continual Labours thereabout.

Queſtion 4.

What are thoſe impediments, I pray?

Anſwer.

To reckon up all thoſe impediments apart, and to ſet down each of them ſo clearly as for every one to underſtand and apprehend the ſame, cannot at preſent be done; neither is it neceſſary to mention all, for it would not onely amount to a great Volume, but would alſo be a burthen to the Reader, and be rather an hindrance than an imitation and encouragement unto him concerning the attainment of the knowledge of ſo great a work.

But yet that I may ſatisfie in ſome ſort, the deſires of ſome or other, I will recount ſome of the chiefeſt of thoſe impediments, by the knowledge of which, every one may know the reaſons that are wont to ſtave off even pious men from ſo great a Secret.

N. B. Firſt of all therefore, there are a many that have not means neceſſary or requiſite to begin and perfect the Work withall, though they have a good Judgment, and are inflamed with an ardent deſire of ſearching after nature and its miraculous effects, and doe not at all fear, nor are diſcouraged at the hard labours that are neceſſarily requiſite to Chymical Operations. Such men therefore as theſe are (being ſtirr'd up by a ſingular candour and ſincerity of mind to a love of honeſty) doe not thruſt themſelves forward after the manner of impious and deceitfull Impoſtors and ſlanderous Vagrants that thirſt after nothing but Gold, and pretend to ſome greedy Miſer, that they will teach him the making of the Philoſopher's Stone (the knowledge of which themſelves are clearly deſtitute of.) No! but they even loath ſuch vain acquaintance, and diſdain that deſpicable name of Gold makers, and content themſelves rather to ſet at home, and enjoy thoſe few things which God hath vouchſafed to beſtow upon them, than to turn Paraſytes, and live in the Courts of Princes and great Men, where they muſt ſtrive by a Fox-like ſubtilty to pleaſe every one, and to bow the head to each ſhoulder, and to ſcrape with his feet. This now is the firſt impediment, which keeps off not a few good Men from the poſſeſſion of ſo great a Secret.

Beſides, there are not a few of this ſort, that briefly and curſorily running over the Writings of the Philoſophers without any ſerious meditation upon the thing they read, or without underſtanding of the ſame, do think themſelves maſters of a great deal of Wiſedom, and firmly perſwade themſelves, that if they have a little ſmatch of Learning, and have but the knowledge of a Tongue or two, and have but by ſome Anagrams pleaſantly tingling in the Ears of ſome great Men, ſooth'd their minds a little, and wip'd them of ſome of their Silver, the finding out of ſo great a myſtery cannot poſſibly eſcape their profound Scholarſhip, but they muſt needs catch it. But yet (by their leave) they are quite out, and full well are they known unto God, who with-holds from thoſe proud deriders, and envious contemners of the truth, his benediction, and leaves them wallowing in their courtly paſtimes ſo long, untill at length (after their turning and applying themſelves from one fooliſh deceived man to another, and ſo on) they doe themſelves lay open their own groſs ignorance and moſt filthy ſhifts, which they have wrapt over with ſuch a deteſtable babling, and by the fruitleſneſs of the event ſhew that their large promiſes of golden Mountains are moſt vain and idle. And hereupon their hopes of having the Philoſopher's Stone (which they ſeek for meerly to advance their pride, and the more eaſily to ſuppreſs the truth) vaniſhing away with the ſmoak, they loſe all their credit and their good report, and can find no more ſuch credulous perſons that will ſuffer themſelves to be ſoothed by their moſt vain promiſes. And this is another kind of thoſe that beſtow their labour in vain about this ſo great a work, who doe thereby add a great load to their wickedneſs, by waſting other mens goods, and deceiving the too credulous, and ruining others as well as themſelves. There are yet a third kind of erroneous ſearchers, and who deceive themſelves with their vain labour, and they are ſuch as being a little too credulous and ſimple when they have lighted upon ſome of the Philoſophers Writings, and read what vaſt treaſures are to be gotten by Chymical Labours, doe preſently feel an itching deſire after Gold, and being inflamed with the covetous deſire of ſuch hungry treaſures, doe apply themſelves with unwaſhen hands (as we may ſo ſay) to the reading of the ſame, and then follow the bare letter in their operations. From whence it comes to paſs, that (all things being obſcure and dark to them, being ignorant and unskilfull, and the light of nature not ſhining upon them) they wander from the right path, and immerſe themſelves in the fruitleſs attempts of vain Labours. Some there are that have indeed ſome kind of knowledge of managing the Fire, and who doe very diligently read over the Writings of the Philoſophers, but yet are quite confounded by their reading them, ſeeing that they cannot find out the true Fire, and true matter of the Stone, which the Philoſophers have ſo obſcurely and ſo variouſly written of. For ſome of them teach the making of the Stone out of fixt Gold and Silver, and not out of the other immature and volatile Minerals, becauſe what a Man ſowes, that he reaps; others tell us the quite contrary, and ſay that there cannot be any better thing made of fixt Gold and Silver, ſeeing they are already brought by nature unto that perfection as not to be reduceable into their firſt matter, out of which (ſaid firſt matter) they affirm that their Univerſal Medicine is to be made, and not of fixt Gold and Silver: And therefore rejecting fixt Gold and Silver, they ſay that the firſt Entities (of the ſaid *Sol* and *Lune*) being yet Volatile,

latile, are the true firſt matter of the Philoſophers Stone, becauſe they are as yet immature (as they phraſe it) and tender, and fit for the making of thoſe things which we are deſirous to accompliſh, which (they tell us) cannot be poſſibly made out of thoſe two fixed bodies. And to help forward yet more confuſion, the multiplicity and variety of names, which the matter of the Philoſophers is ſtiled, is no mean impediment to the underſtanding. One bids us ſeek it in Vitriol, another in *Mercury*, ſome in *Saturn*, others in *Magneſia:* And thus is that matter deciphered by various and innumerable names, inſomuch that it is impoſſible but that he who is ignorant, and not well verſed in theſe affairs ſhould be hurried into various doubts and perplexities, being clearly ignorant whether or no the Philoſophers mean the common Vitriol, or a Vitriol extracted out of the fixed Metals, eſpecially ſeeing they too and agen affirm, that their Vitriol *Mercury* and *Saturn* are not thoſe vulgar Metals of Gold, Quickſilver, and Lead. Who therefore I pray could be ſo wiſe and prudent as to rid himſelf out of the ſo many confuſed and intricate windings of this Labyrinth? Even hence it is that the moſt learned and diligent ſearchers have been wound into ſo many erroneous Labours, nor could by any means get clear of thoſe hedg'd up turnings.

Nay yet more, the inconſtancy of ſuch as labour is no ſmall impediment, who (ſhould they have the matter) would not perfect the ſame by reaſon of their fickle inconſtantneſs. For if the Stone does not preſently come forth, and make them maſters of what they deſire, away they throw their Books and tread upon them, and load the Authours with curſes and imprecations, accuſing them of wicked deceit, in that they have not written clear enough for every one to underſtand ſo great an Art at the very firſt daſh, and to become a maſter of ſuch a notable treaſure with ut any labour at all.

You ſhall likewiſe meet with ſome that are ſo very wiſe as that it ſeems no ways likely unto them, that ſo divine a gift can be prepared out of ſo vile abject, and contemptible things, whenas though (by their leave) every good thing (for the moſt part) is wont to be abject and mean, and not precious, witneſs *Sandivow*, who tells us that he had declared the whole Work to not a few, even from the beginning to the end, but (by reaſon of the meanneſs of the ſame) they judged it to be but of ſmall moment, believing that no good could poſſibly proceed thencefrom.

Beſides too, it oft times happens that even many of thoſe who by their reading and diligent ſcrutiny have attained the knowledge of the true matter, are notwithſtanding that ignorant of the true Fire that gives Tincture unto that true matter, and therefore cannot be maſters of their wiſhes and deſires. Infinite is the number of theſe and ſuch like obſtacles which impead, and retard the deſirous ſearchers after ſo great a Work. For many there be that ſeek, but few are they that find.

Queſtion 5.

Whether or no the Philoſophers do ſo much differ amongſt each other, as that one hath prepared that Univerſal Medicament of this matter, and another of that?

Anſwer.

Yea, verily they ſeem much to differ amongſt themſelves, not onely as to the external Letter, but their Opinions alſo that concern the very matter it ſelf are very various and diſcrepant, but yet as to the Baſis and Fundamentals of the truth, there they are of one mind, though one hath prepared his univerſal Medicament of one matter, and another of another matter, and have each (after the finiſhing of their Work) deſcribed the operation agreeable to their own way of proceeding.

Queſtion 6.

Whether or no there are more univerſal matters than one, out of which the univerſal Tincture is prepared?

Anſwer.

As far forth as we can gather from the Writings, both of the Ancient and Modern Philoſophers, they have not onely uſed divers matters, but alſo different ways of operation, in the preparing of their Tinctures: But the Tincture being acquired, each had an univerſal Medicine, and was therewithall content, though (I confeſs) one Medicine was more virtuous and efficacious than another.

Queſtion 7.

Which of the Metals and Minerals are to be accounted of as the true matter of the Stone?

Anſwer.

If you ſhould onely mind the literal ſence, the Philoſophers then ſeem to know a way of preparing their Tincture, not onely out of all the Metals, but even out of the Minerals too: For they have impoſed ſo many names upon their matter, calling it one while Gold, another while Silver, or *Mars*, or *Saturn*, yea and *Magneſia*, Arſenick, Sulphur, Soot, Urine, Blood, Sperm, *Menſtruum*, and I know not how many abſurd names, which have ſeduced the unskilfull Searchers into various errours, whereby they have beſtowed their Labours, and ſpent their Eſtates upon unprofitable matters, and ſo loſt both their Pains and Charges.

Queſtion 8.

Whether or not the Tincture may not be extracted as well out of fixt Gold and Silver as out of the other imperfect Metals, and immature and volatile Minerals, ſeeing that the Philoſophers ſay, that all the Minerals and Metals have their original out of one and the ſame root, and do agree as to their inward Eſſence, the difference that is between them conſiſting onely in the purity or impurity, and in the fixity or volatility of them. If therefore the pure be but ſeparated from the impure, and Shell from the Kernel, that ſeparated purity of the imperfect Metals will give the ſame that the moſt pure Gold and Silver will. Nay more, if it were neceſſary it mought eaſily be demonſtrated, that a true Tincture, and wholſome for both the bodies of Men and Metals, may not onely be prepared out of any Metal and Mineral, but even out of the Vegetables and Animals themſelves too, and and that by reaſon of their included Sulphur, which is the Father and Original of all the Metals?

Anſwer.

But what need is there of ſeeking that in far remote

mote places, which offers it ſelf nearer at hand? wiſely therefore did the Philoſophers reject all the Vegetables and Animals, and other the like unprofitable things, as to the making the univerſal Tincture, they expreſly adviſed us, that ſuch things as you deſire to reap, you muſt ſow; and that he that thinks with himſelf of beſtowing his labours about ſuch operations, muſt begin with thoſe things that nature hath left off at, and could not advance to a farther perfection. And what elſe I pray do Artiſts ſeek for but Gold and Silver? if ſo, then (as the Philoſophers do ſeriouſly admoniſh us) we muſt take their Seeds and Sow them, if we would Reap a much augmented and exalted Crop of Gold and Silver.

Queſtion 9.

If the caſe ſtands thus with theſe labours, as that thoſe things which are ſown, are again reaped in a multiplied encreaſe, why is not the moſt noble Seed of Gold onely ſown? What need is there of adding Silver thereunto which there's no appearance (as to the outſide view) of any colour.

Anſwer.

Although there be not any apparent colour in the Silver, yet is it certain that there lies abundance of colour therein hidden, which notwithſtanding does not diſſolve it ſelf before it is unlockt and inverted by the labour and help of the true Chymick Art, and that its external whiteneſs be hidden, and its internal redneſs be brought forth to light. For verily a true Tincture neceſſary for the tranſmutation of the Metals can never be prepared out of bare ſimple Gold, without an addition of Silver thereunto: For Silver is the Matrix of Gold, in which, this (as being the maſculine Seed) germinates, grows and multiplies its colour.

Queſtion 10.

This ſeems to every body a wonder that a red colour ſhould alſo lie hidden in white Silver, ſeeing that there are not a few who think that even Gold it ſelf does not contain more of colour than it needs for its own ſelf. How therefore muſt this be underſtood?

Anſwer.

As to this, you muſt not at all mind the external ſhape, but that which lies occultly hidden. The internal parts of any Seed are not viſible to the ſight, as for example. A Vegetable Seed preſents you not with the ſight of any various colours, but when it is committed to the Earth as to its Matrix, it then ſends forth firſt green Sprouts, then Stalks, then Leaves, after which ſucceed moſt curiouſly painted colours, that at laſt the Seed comes forth with an incredible augmentation, all which were not viſible in the bare Seed.

Conſider alſo the Egg of any Bird, in which no body can diſcern any Bird, conſiſting of ſuch divers and various Members, and adorned with ſuch delicate Feathers afore the ſaid Bird is hatcht, the Egg being ripened by an external cheriſhing heat.

Queſtion 11.

This ſimilitude of the Seed of a Vegetable, and of a Bird, doth not a little enlighten my mind and give me encouragement to believe: I do therefore firmly believe that there is hidden an abundance of colour not onely in yellow Gold, but alſo in white Silver it ſelf too, inſomuch that I do aſſuredly perſwade my ſelf, that a conſtant and moſt high Tincture may eaſily be prepared out of Gold and Silver, and that it is a very difficult matter to prepare a permanent Fire-brooking Tincture out of the imperfect Metals and immature Minerals (though they alſo hide within their inſide bowels moſt exquiſite colours) by reaſon of that imperfection and unripeneſs which they lie under.

Anſwer.

Your judgment and opinion is true. For although the leſſer Metals, as alſo the Minerals themſelves too do hide within their bowels, the moſt high colours, and though thoſe very colours may eaſily be ſeparated from their unprofitable bodies, yet notwithſtanding there is requiſite to ſuch operations a long ſpace of time, great expence, and hard labour, *viz.* to make ſuch Tinctures conſtant, permanent, and fixt by the common Fire of Wood and Coals. But yet he that knows the ſecret Fire of the Philoſophers, will eaſily give unto ſuch Tinctures that conſtancy in the Fire that is requiſite, which otherwiſe, and by the common Fire, will very difficultly and hardly ever be effected. For example, common water will always remain water, and therefore will never be brought into a ſtony or metallick nature by the Fire of Wood or Coals. But a thing may be eaſily reduced unto that which it was before: If an hard Stone be turned into pure water, it may be reduced (even by the help of the common Fire) out of that ſame Water into a more pure Stone, and ſo is it likewiſe with a Metal, if treated with the ſame operation.

But yet I do not deny but that even any common water, or any Stone may be changed into a Metal, but then I ſay, it muſt be done by the help, not of the common Fire, but of the Fire of the Wiſe Men, by which Fire, even the Waters are wont to be changed into Metals in the Earth: For all Metals and all Stones have their riſe out of the Water, and were at firſt Water. Whoſoever therefore doth well and throughly know this ſecret Fire, which the Philoſophers have always with their utmoſt diligence and care concealed, he may work upon all the firſt beings of Gold and Silver, as common Sulphur, Mercury, Antimony, Arſenick, Auripigment, Cobolt, and others of that kind, and tranſmute them into red and white Tinctures. But if he has no knowledge at all of the ſame, let him in God's name apply himſelf onely to fixt Gold and Silver, and having volatilized them, turn them into Water, and again turn this ſame Water into a fixed Stone, which if he brings but to paſs, he enters upon the neareſt way, and will be a maſter of that which he beſtows his labour in the ſearch of.

Queſtion 12.

If this be the moſt compendious way of getting the Philoſophers Tincture, viz. *out of thoſe known Metals, as fixt Gold and Silver; Why do ſome of the Philoſophers write that their* Sol *and* Lune *is not that common and well known Gold and Silver, and that as well the Poor as the Rich have that* Sol *and* Lune *as is theirs, and may eaſily prepare the Tincture it ſelf there out of; ſo that (it ſeems) all ſuch as buſie themſelves in the ſearching after that moſt eminent Medicine in the common Gold and Silver, do extreamly err?*

Anſwer.

Anſwer.

Theſe Philoſophers that reject the common and well known Gold and Silver, were clearly ignorant of the knowledge of making of the Tincture out of them, which had they but known and well underſtood, they would not ſo confidently have affirmed ſuch a thing in their Writings. But foraſmuch as they knew but that one way of making the Tincture out of the volatile Minerals, and that that way of making it with fixt Gold and Silver was unkown unto them, they could not mention unto us any other way than their own ; whereas though there are not a few of the Philoſophers, that on the other hand commend unto us the common Gold and Silver, and reject all the other Metals. Nor is the number too very ſmall, of ſuch as do confeſs, that the Tincture may be made of the more imperfect Metals, and volatile Minerals, but yet with this caution, that one ſubject is much eaſier, ſpeedier, and better to operate upon than another is.

No Man can all at once clearly know and apprehend every thing, and therefore it would be much better for a man to judge onely of the things he knows, and not cenſure the things he is ignorant of, that ſo the World may not by this means be ſtuft with ſo many Writings which thwart one another. Some there are who perſwade themſelves, that (when they do at long run arrive by many turnings and windings unto the wiſht for place) there is no certainer, nor more compendious way than that which they took in making their Journey. Hence it is, that the Writings of the Philoſophers are ſo involved with intricate opinions, out of which no body can well free himſelf, unleſs the whole knowledge of nature be opened unto him : But ſeeing the number of ſuch is very ſmall, therefore it muſt of neceſſity follow, that they who err are very many, and that they who become maſters of the truth, are but a very few.

Queſtion 13.

What therefore is it that is neceſſary for us to know, or what things muſt we be furniſhed withall, when we apply our minds to the ſearch of ſo great a ſecret ?

Anſwer.

Foraſmuch as the univerſal Medicine is the gift of God, and not of Man, it is but juſt, that the ſame be ſought for at the hands of God, and not of Men, who (in one night and by a Dream) can reveal thoſe things, which a Man will not get all his life long by his reading of the many intricate Books extant; And thus much doth *David* teach us, ſaying, *In vain do you riſe up early, and go to Bed loaden with cares, for God beſtows his gifts upon thoſe that love him, even whilſt they Sleep.*

Queſtion 14.

By what means may a gift ſo divine be obtained from God ?

Anſwer.

By daily praying unto him, and by accompanying your Prayers with daily and diligent Labour. For Prayers alone wont ſerve turn, unleſs the reading of good Authours, and continued Labour be alſo adjoyned thereunto. God reveals his good things to mortal Men, by their ſerious Prayers, and and continual Labours.

Queſtion 15.

Are all Men fit to beg ſo great a gift at God's hands, without any difference at all, or doth ſo great a ſecret require onely ſome particular Men's Supplications, and not admit every one, as if all were fitted thereunto ?

Anſwer.

Verily every body is not fit or worthy to be a maſter of the ſame. For ſhould it be granted every one, this ſo exquiſite an Art, and of ſo great a concernment, would become as common as the baking of Bread, and brewing of Ale, but this is contrary to the command of God, who wills not, that the Goat ſhould have ſo long a Tail as the Cow, for ſo in Pride ſhe may ſmite out her own Eyes. God well knows when, and where to give, and who it is that merits ſuch great favours. But however this is an undoubted truth that the proud ſhall never obtain any good thing at the hands of God.

Whoſoever therefore has a deſire after great things, let him throughly ſearch his heart, and ſee if it be upright and ſincere towards God, or no, and it is neceſſarily expedient for him well to examine himſelf, (before he ſets about the Labours of ſo great an *Arcanum*) for this reaſon, leſt it ſhould happen to him, as it did to that ambitious and proud Gueſt, who (as Chriſt teacheth) ſate himſelf down in the chiefeſt place of the Feaſt, which he was not worthy of, and was afterwards conſtrained (to his great ſhame and reproach) to yield the ſame to a worthier and honeſter Man than himſelf.

Queſtion 16.

How muſt ſuch a Man be qualified, that deſires to obtain from God by his Prayers, ſo great a ſecret, and by his Labours to bring it to a final end ?

Anſwer.

Firſt of all an *Arcanum* of ſo great an importance requires a free Man, and ſuch an one as is not bound to any other, nor intangled with any other humane affairs, that ſo being in a quiet and ſilent poſſiture, he may by his daily Prayers ſue unto God for his Bleſſing, and may be at leiſure continually to read good Authours, and to let no time ſlip wherein his Labours are required. Then farther, ſuch a Man muſt likewiſe be pious and liberal, and forward in helping of the Poor : he muſt alſo be no Tatler, he muſt have a good and ſound mind, and be given to temperance and ſobriety. He muſt not do as the *roving Mountebank* doth, inſinuating himſelf one while into this Man's Acquaintance, another while into that Mans : He muſt not be over credulous, preſently to believe every ones pretenſion : He muſt not mind his ſole benefit nor be prone to covetouſneſs, and aim at graſping all unto himſelf. He muſt not be of an unconſtant mind, but expect and wait for (with a patient and conſtant Reſolution) the end of that which his deſire inclines him to, and therefore he muſt not be preſently enraged, or be affected with a wearieſomneſs if it ſhould ſo happen unto him as not

to have every thing presently answering his expectation. He does not propose unto himself the getting of great honours in the World, and of having in his hands power and authority, but rather aims at the honour of God, and the helping and succouring the poor sick and distressed ones. Farther yet, he must be furnished with necessary means, lest he be constrained through the want of Coals, Materials, and other necessaries, to leave off the Work he has begun. But he must especially have God always before his Eyes, and expect the happy event from him alone, and attribute nothing at all to his own peculiar Wisedom, and be daily at his Prayers, and labour without ceasing, and with a patient mind wait on the Lord for a successfull end.

Briefly he that is studious after such a secret, must so lead his life, as to walk unblamably both before God and Man.

Question. 17.

Which of these two ways is most safe and most easie for the attainment of this divine gift, that which makes use of the common Gold and Silver, or that which useth the unknown, and as yet volatile Gold of the Philosophers?

Answer.

You must know that both ways are good, and lead you on to your wished end, if they be but rightly and orderly according to Art proceeded withall.

Question 18.

By what means shall an unskilfull beginner, and one who is ignorant of so great an Art, enter upon the right way, and not err, whenas he hath not any one to guide him as it were along by the hand?

Answer.

Who shewed the way unto the other Philosophers that were before us? were not all of them (some few excepted who confess that they learned the Art from good Friends) constrained to learn the same out of the Books of the Ancients, and by the divine Revelation?

Question 19.

Where may a Man find such good and well disposed Friends who will shew the way to him that is unskilfull?

Answer.

Such men are wondrous rare, and indeed good reason have they so to be, and to deal warily and wisely in revealing such notable secrets. It is not engraven on each Man's Forehead, whether he be good or evil; we rarely meet with any example, whereby it hath appeared, that even a Father hath disclosed to his Son so great a secret before his death. Nay more, if Parents have left ought written for their Children at their death; yet hath it been so intricate as that they could not do any good on it without divine Revelation. And upon this very account have divers such desisted from the work, finding that the Writings which their Parents left them were fully as hard to be understood as those written by other Authours, and which were not penned and published for the sake of their Children, but for the sake of all others in general.

Question 20.

What use are such intricate and obscure Writings of? would it not have been better that they had not Written at all? If they had but onely disclosed the true matter, it would have afforded the searching inquirers more light, and they would have been able more easily to have apprehended the truth?

Answer.

No surely, it would not have been better, if they had passed over so weighty a thing in silence. Whence I pray should we their Successours have known, that there is such an excellent Medicament in nature? The Books they have written do remove from us even every Scruple of doubt, and cause us to believe, that there hath been, is, and may be made such an universal Medicament, if God permits. The reason why they have not jumpt together in disclosing the matter of the Stone with one unanimous consent, is this, because one used this matter, another that, for the making of their universal Tincture, and so each of them have described the way of making the same after his own way. Hence it is, that one hath delivered this manner, but another that hath proceeded another way could not give us the self same accompt of making it just as the other did, but hath hinted unto us onely, the way which he himself used.

The greatest difference is about the matter onely of the Stone; one part of them saith that the common and fixt *Sol* and *Luna* is the matter of the Stone, and lays by or rejects all other Subjects. Another part affirms that a volatile and an unripe Gold is the Master of the same, and that the common *Sol* and *Luna* are to be wholly waved as being unprofitable for the matter of the Stone. Moreover the Philosophers in their description of making the Stone mention a dry way and a moist way, a long way and a short way, a common Fire and a secret Fire, which they used in the ripening of their Tinctures. And now (on this accompt) it could not otherwise be; but that they should publish such unlike, dubious, and thwarting Writings, which have rendred the way of finding out the truth so difficult and intricate, and have led the Lovers of the Art into such abundance of Errours, and fruitless Labours. The common Fire I wish, is destitute of the power of ripening volatile Gold, and reducing it into a Tincture, which that secret Fire, continually burning with its flame in the glass upon the matter of the Stone, is able to effect. Now besides the common Fire, there must necessarily be the assistance of the moist Fire, which being kindled by the Fire of Coals and made efficacious, doth radically conjoin the fixt Gold and Silver, brings them unto a volatility, and makes them again constant in the Fire. This way (in my judgment) is the shortest, easiest and safest of all; for it makes the fixt *Sol* and *Luna* spiritual and volatile in three days time, and turns them into the *Mercury* of the Philosophers, which white *Mercury* of the Philosophers doth afterwards pass in one days space, into the black Lead of the wise men, if a small Fire be administred thereunto. This Lead being

ing put into its requiſite glaſs, may (by the help of common Fire) be reduced (after its changing of Colours) into a conſtant Tincture.

And now though the ripe and fixt Gold coſt and be far dearer than the immature *Sol* is, yet that's no matter, for there needs not a pound of Gold to be uſed about the compleating of this work, but haif a pound onely, or elſe but two or three ounces, that ſo the operation may be the ſooner ended. Nor will he that ſhall once have brought one half Ounce unto a due perfection, need ſuch a deal of Gold, for he wants not Gold any more, wherewith to begin the operation a new. And although on the other hand the maturation of the immature Gold by the ſecret Fire doth not require ſo much expence as the common Gold doth, yet it requires more time for its perfection. Beſides too, the moiſt way is always ſubject to more Caſualty and Hazard, and requires a much longer time to bring it to the deſired perfection. It is therefore at every man's pleaſure, to chooſe which of theſe two ways pleaſeth him, onely he muſt proceed warily and prudently. And if he ſhould chance to commit ſome Errour once or twice, yet will not ſuch Errours be of any great derriment unto him, if he can but at laſt arrive unto the wiſht for end, and reap the multiplied and manifold Fruits of his Crop. Thus much was I willing (and indeed ought) to communicate of my opinion (concerning the univerſal Medicine) unto the Diſciples of *Hermes*, but yet without preſcribing (or obtruding my thoughts) upon any one, but leaving every one to his own Conceptions

Mean while I would adviſe every one not to attempt a thing of ſo great a moment, raſhly and inconſiderately, but in the firſt place accurately to weigh all things in his mind, as to what may be done, and what may not, leſt he repent him at laſt and be quite tired with his fruitleſs Labours. For it is no mean ſlight buſineſs to prepare the true Tincture of the Philoſophers, neither is it given unto every man to have the knowledge and poſſeſſion of ſo great a Work.

Queſtion 21.

Would it not be a very convenient thing for two or three Friends to joyn their hands together, and help each other by their mutual Labour and Expences, and ſo eaſe that trouble which otherwiſe one alone muſt undergo? Or if any one be ſo minded as to attempt the work alone, would it not be better for him to get him ſome faithfull and diligent Operatour, whoſe help he might make uſe of, in the promoting and forwarding of his Operations.

Anſwer.

For my part, I would not adviſe any one to do thus. For when a work of ſo great a moment is to be undertaken, and to be accompliſhed by the common mutual Expence and Labour of others, the Affairs are then obnoxious to no ſmall hazard, and for the moſt part come ſhort of the hop'd for event, by reaſon of the moſt different Opinions amongſt men, concerning which the Comœdian ſaid very right, ſo many heads ſo many opinions, every one hath a peculiar fancy.

Now then, from one deſiring this thing another that, there can't ariſe ought elſe but confuſed actions and operations, which are ſo far from forwarding the work, as that they retard and obſtruct the ſame. Many Work-men diſagreeing amongſt themſelves, can never build an Houſe agreeable to the right dimenſions of building. And therefore it is far better for every one to apply himſelf ſingle and alone to the performing of ſo great a work, and quietly to attend upon the ſame, and invoke God's help alone, and leave off his expectations from man, amongſt whom fidelity and love, are like the rare Bird in the Earth, and as ſcarce as a black Swan! Nay even the friendſhip of brethren is wondrous rare, and (which is worſt of all) the bond of friendſhip is too often broken aſunder betwixt Parents and Children. The golden Alphabet doth likewiſe in its beginning teach us the very ſame, ſaying, truſt in God onely, and in him place thy hope, give not any credit to the promiſes of man, God onely is faithfull, fidelity is baniſhed out of the World.

'Tis ſufficiently evident, what kind of doings there is in the Courts of great men, you'l there find 2, 3, 4, or more Chymical Operatours buſily imployed about making the Philoſophers Stone, for they ſeek after nothing leſs, but yet by reaſon of their ignorance, they effect but very little or nothing at all, for the main thing that they mind is to ſtrut it bravely out in their Silks and gay Apparel, and to have their Tables furniſhed with plenty of various Diſhes, and generous Wines and Drinks, whereby they may ſtuff their Bellies; and this is clearly teſtified by daily experience: and as for taking to ones ſelf an Operatour, that is more hazardous than the other, where the work is attempted by a confederacy, at their common mutual Expences and Labour. For ſeeing you cannot make an inſpection into any man's heart, whereby to know what Monſter he there cheriſheth, and what good or evil he has hidden in the inſide of his heart, you cannot poſſibly promiſe your ſelf any certainty of his taciturnity or fidelity, and therefore plainly ignorant muſt you needs be whether the man you would take to aſſiſt you be faithfull and no tatler. Verily even the common Labour cannot be committed to ſuch men without hurt and damage, but great Arcana's cannot be left to their care without aſſured loſs of all. 'Tis wondrous rare to find a Servant ſo faithfull, who (after he hath ſlily gotten the knowledge of one or two Secrets though but trifling ones too) does not preſently perſwade himſelf, that now he's a skilfull Artiſt enough, and no longer needs the inſtructions and manuductions of any other. Theſe kind of perverſe men being by thus (evilly perſwading themſelves) ſeduced, are preſently wont ſecretly to withdraw themſelves, or if haply they do ſtay yet longer with their Maſter, they behave themſelves ſo malepertly and unmannerly, as that they ſpoil the things committed to their Charge merely to accompliſh this end that their Maſter may diſmiſs them. If therefore you will not wink at and ſuffer them to ſpoil and deſtroy, by their ſaucy regardleſs Labours the things they have under their hands, but are conſtrained to put away theſe moſt ungratefull and plainly unmindfull men of the benefits they have received, yet will they not acquieſce here with an honeſt diſmiſſion and parting, but will every where gnaw and wound thy good name by abundance of reproachfull Stories, as being now thus opiniated that they far excel you, their Maſter in Wiſdom, Skill and Knowledge. But yet I except in this place thoſe Servants that are honeſt, pious and diligent, and that love vertue, and make a conſcience of their ways. For the Devil has not got the poſſeſſion of all

all men's hearts, for there are ſome Chymical Operatours to be found who are ſo faithfull unto their Maſters, as that could they of a farthing make a Florin for their Maſters, they would moſt cheerfully do it. But yet theſe men are ſo very rare, that ſcarce one in ten can be found that you may give credit to, and truſt. And my own thirty years experience hath taught me, and therefore I tell you no more than what my ſelf have to my own detriment experienced. Read but what *Paracelſus* hath written of theſe perfidious Knaves, amongſt other things he confeſſeth, that thirteen of his Servants came under the Hangman's laſh, and that of them all he found but one faithfull, (and that was *Operinus*) and yet he (after *Paracelſus* his death) did manifeſtly enough bewray his diſſimulation and unfaithfulneſs; for he did not onely load him with reproaches, but alſo publiſhed ſlanderous Writings of him. This is the thankfulneſs the World is wont to repay for the good that is done it, ſhun therefore ſuch as theſe the moſt you can, for they neither fearing God nor reverencing men, make no matter at all of either oppoſing the moſt apparent truths, or of defending it by moſt manifeſt and evident Lies. And although the malicious wickedneſs of a man, be not preſently known, yet notwithſtanding it bewrays it ſelf by the ſlanderous reproachfull lies, with which it requites the good turns done him by his Neighbour.

Thus much I judg'd worth while to communicate to all the Diſciples of the Hermetick Art, that ſo they may learn to beware of theſe kind of Harpies.

Queſtion 22.

Seeing it is not good to enter into friendſhip or conſortſhip with others, in order to the attempting ſo great a work: And ſeeing a man runs a greater hazard in taking to himſelf an unknown Operatour, haply it would be the beſt way to ſeek after ſome particular Medicament which may be ſerviceable for the benefit of both high and low, and which may not onely prove helpfull unto the poor, but alſo by which a neceſſary Suſtenance may be found even amongſt the rich, and ſo by this means may a man lead a quiet life.

Anſwer.

This advice or determination I confeſs ſeems far better and more ſafe than the two former, but even this too needs a provident warineſs, *viz.* if a man ſhould haply (by his ſedulous ſearch) acquire the knowledge of ſome eminent and excellent Medicaments, he muſt take heed leſt by preſently making every one partaker of the ſame, he pulls damage on his own head. For 'tis an uſual cuſtom amongſt wicked men to endeavour (aſſoon as they find any one gifted by God with ſuch a bleſſing) to get it out of the breaſt of the Poſſeſſour of the ſame, by moſt cunning Subtilties, and promiſe even golden Mountains, and ſuch as they are never able to perform. And if once thou let'ſt the Art paſs but out of thy hands and come within the Clutches of other men, thou may'ſt well fear in the firſt place leſt it ſhould be made publick, and ſo thy ſelf be deprived of the benefit of the ſame, though they whom thou haſt truſted with the ſame have bound their credit with the firmeſt obligations imaginable, and this now is to be underſtood of ſuch men from whom ſuch bonds as they call them may be demanded. But as for the great ones that are wont to give onely their words (and ſtand upon that) when they have got any *Arcanum*, they are wont to deliver it to their Chymical Operatours to make, for themſelves are partly ignorant of Chymical Operations, and partly ſet not their own hands to work; if their Operatours be skilfull in Chymical Operations and bring the ſame to the expected end, you ſhall be preſented with ſome ſmall reward, and even of this too will he (whoſe charge the preſenting of it is committed unto) keep to himſelf the better half. This now is done unwittingly to their Maſters, and who dares inform them of ſuch deceitfull Servants, and purchaſe to himſelf the envy and hatred of the Courtiers? And ſo thoſe who are commanded to bring thee good ſweet Milk, do themſelves firſt take away the ſweet fat Cream, and then bring thee the ſour Whey. But if for the more ſurety, thou ſendeſt any Servant that may be there at the perfecting of the Operations, he will (if faithfull ſatisfie thee; if not, he will preſent thee with as much of the reward as himſelf pleaſeth. Thus hath it hapned unto me, for 'mongſt other Servants I have had ſuch, that in their Cups have impudently boaſted of ſuch kind of theft, and have prevented me of a preſent or two that belonged unto me, and have made themſelves merry therewithall.

Theſe and other ſuch like inconvencies are wont to happen upon the revealing of *Arcanums*, though they ſhould fully anſwer the expectation of thoſe whom they are revealed unto. But if it ſhould happen that thoſe Chymical Operatours ſhould by reaſon of their ignorance commit ſome Errour in their Labour, or ſhould have no mind to the work as being a little more troubleſome than ordinary, fearing leſt the Sparks of the Coals ſhould light upon their Silken Garments, and that their hands ſhould be defiled with the blackneſs of the Coals, they preſently perſwade their Lords, that the *Arcanum* which was thus revealed is falſe, and that you are a cheat and a mere vapour, and ſo they do not onely rob thee of thy good name, but do likewiſe by their fraudulent and lying tricks deceive their Maſters affirming thoſe things to be falſe, which notwithſtanding are moſt certainly true. Several Letters I have by me, written unto me from ſuch Court Operatours, in which they confeſs that they have wrought up (or made) thoſe *Arcanums* (which were ſent them) not without good Succeſs, and that therefore they would deſire yet greater ones than thoſe: but yet they have afterwards ſpread obroad a falſe report, and ſaid that they never could receive any benefit by them at all. And that fruit or reward which was due unto me for my diſcovery, themſelves intercepted, ſome got them fat Offices, others were gifted with Nobility and Money. And ſo indeed is it an uſual thing for thoſe that dreſs the Vines, and preſs the Grapes and make the Wine, to be (by a forc't put) content with the Husks, whilſt the idle and ſuch as work not, drink up the Wine. Far better is it therefore, for every one to preſs out his own Grapes. By this means will a man know what is his, what he has, and what he does, whereby he may uſe his own things as beſt likes him. Now then well may the man that knows many Secrets be deterred by the ſo many and ſuch adverſe Chances, from making others partakers alſo of the ſame, and well may he eſteem it much better to enjoy the few things God hath beſtowed on him, with a quiet mind, than to expect many things (but with a great deal of danger) from others.

And

And thus much ſhall ſuffice to have been premiſed by way of *Queſtions* and *Anſwers*. Now follows the uſe of ſome eminent *Arcanums* and incomparable Medicaments, which have been mentioned in the Books I laſt publiſhed, one of which treats of occult Fires, and the other contains three Dialogues.

Of the Lyon, or of the Bloud of the Lyon, or Gold, how it is to be prepared, and to be moſt profitably uſed as well in Medicine as in other Arts.

AS concerning the way of preparing this Bloud of Gold, it is already deſcribed in the firſt Dialogue, and its adjoyned Corollary, inſomuch that there needs no fuller declaration in this place. But yet you are to know that I have met with (ſince the writing the firſt Dialogue) a far eaſier and more compendious way of converting or turning any Gold, even in a moment, into Bloud, by the help of our occult *Sal Armoniack*. But this Bloud is not to be uſed in Medicine, as it is *per ſe*, becauſe of the *Sal Armoniack*, which tranſmutes the Gold and changeth it into Bloud. For theſe ſharp Saline and Corroſive Spirits are unprofitable, and hurtfull in Medicine, and are therefore to be ſeparated from the Gold, which is done by the pouring on of common Water or Rain-water, which imbibes the Spirits of the Salts, and precipitates the moſt red Powder of the Gold to the bottom of the Veſſel. This Powder muſt be well waſh't by ſeveral waters, and be well freed from all its ſaltiſhneſs; which being ſo freed, may (by the addition of ſome Cordial Water) be reduced to the conſiſtence of a Syrup, and ſo kept; the Doſe whereof may be augmented or diminiſhed according to the condition of the ſick, and the diſeaſe. But commonly ſo much of this Golden Bloud is ſufficient as ſerves to tinge a ſpoonfull of Wine, Ale, or other Vehicle, with a red Colour. It is uſefull in all diſeaſes in which the Heart needs ſtrengthening. But eſpecially it allays the immoderate Flux of Bloud both in Men and Women, and cures the Gonorrhea, Leproſie, and French Pox, if the Body ſhall be purged with due Purging and Sudorifick Medicaments. It heals thoſe Puſtules in the Skin, the Noſe, and other places of the Face if outwardly anointed with a Feather ſeveral times a day. For it drys vehemently, and makes the Skin it ſelf fair and ſmooth. And therefore upon this account it is exceeding profitable for Women that have naturally pale Faces and Lips, for being laid on, it changeth the paleneſs into a comely and natural Colour, eſpecially if a little white Oil made of Talk be thereto admixed, to temper and allay that moſt red Colour of the Gold, and it likewiſe is a moſt delicate Fucus for ſuch Women whoſe Faces are not onely pale, but alſo dyed with a duskyiſh or yellow Colour, and by means of this Coſmetick or Fucus may they paint their Faces of a natural Colour. For no Fucus may compare with this, for it is ſo commodious and durable that it cannot be diſtinguiſhed or known, nor be corrupted as others are, which being done with Vinegar, ſowre Wine, Lemon-juyce and ſuch like things do preſently, by a breathing on them, turn into a filthy Colour, and bewray a painted Face. For this Golden Bloud is ſo very conſtant, and doth ſo keep its moſt curious Colour, as that it remains ſafe from all injury of the Elements.

Furthermore, this Bloud (before it is freed from its Saline Spirits) tingeth the Hair, Skin, Wool, Bones of Beaſts, and Feathers of Birds, with a moſt delicate purple Colour; which paſſing into a redneſs, is ſo conſtant, as that no ſharp Waters can corrupt it, and therefore it is far beyond all other purple Colours, what name ſoever called by, and worthily may it be accounted for a kingly Colour.

It would be too long to reckon up in this place its various other uſes: It ſerves in Medicine for the tinging of divers Confections and Cordial Waters, which Colour is much nobler, and more profitable than thoſe wherewith Confectio Alkermes and Cordial Waters are wont to be tinged. 'Tis evident that the Colour of Gold doth rather benefit than hurt the Sick, which if the ſaid Confections or Cordial Waters are coloured withall, they become the fairer, and they are rendred yet more delicate, if the Atoms of Gold, being thereunto adjoyned, fly about in the Wine or Water like ſo many very ſmall Stars. For if to an *Aq. Vitæ*, which is already tinged with the Bloud of Gold, a little of the ſaid Atoms be admixt, they will ſhine out of that delicate purple Colour, like the moſt bright *Aurora* (or day-break) in the Heavens. This is a moſt excellent way of making *Aq. Vitæ's*, for the Atoms of the Gold are ſo very ſubtile, as that they eaſily admit of concoction and digeſtion by the heat of the Stomach, and emit their Virtues, which thoſe common Gold leaves which are mixt with *Confectio Alkermes*, *Aq. Vitæ*, and ſuch like compoſitions onely for ornaments ſake, doe not doe: And therefore they are no ways comparable to thoſe Atoms of ours. 'Tis no ſmall trivial matter that I diſcloſe unto you, and verily it would be well worth the while for the Apothecaries ſhops of noble men to eſteem highly of the ſame: And as for what and how great things may farther be done with this ſame Tincture of Gold, as to the Metallick matter, may be found in the firſt Dialogue.

An eaſie way of making and preparing the Atoms of Gold.

DIſſolve an Ounce and an half of Gold in ſtrong Spirit of Salt, or if you are not furniſhed with this Spirit, then diſſolve the ſame in common *Aq. Reg.* and pour upon the Solution one pound or two of Rain water, whereto is admixt about one pound of Rheniſh Wine, mix them altogether in a glaſs, and ſhake them well, and ſhut the glaſs cloſe that no duſt fall therein, ſet it by for ſome days in a warm place that ſo the Gold may precipitate out of the Water, and ſettle to the bottom of the Veſſel in the likeneſs of moſt curious ſmall Stars. But if all the Gold ſhall not be precipitated in this time, ſet then the Glaſs in a B, and let the Solution boil a while; then when it is again cool, ſet by the Veſſel ſome-where that the Gold may ſettle, which being diſſolved into Atoms, (and the Water and Wine poured neatly off) is to be taken out of the Glaſs, and to be often waſh't with pure water: So ſhall you have the Atoms of Gold, which you may ſafely make uſe of in Medicine.

N. B. But you are to note, that it is impoſſible for the Gold to be by thus proceeding ſo diſſolved as for nothing at all thereof to remain in the diſſolving water. And therefore 'tis neceſſary that you ſeparate the reſidue of the Gold out of the water by precipitation. And in my other Writings will you meet with ſeveral ways of ſeparating the ſame. Theſe moſt fine and ſubtile Atoms of Gold may you alſo make uſe of with moſt notable profit even in o-

ther Chymical operations, concerning which you will find clear inſtructions in other places of my Writings.

And foraſmuch as I here make mention of a moſt excellent *Aq. Vitæ*, it ſeems in my Judgment neceſſary and profitable to add here a full deſcription of the ſame, together with the uſe thereof.

The way of making a Golden Aq. Vitæ, *and ſuch as never as yet hath been deſcribed and publiſhed unto us by any Phyſician.*

TAke of the beſt and pureſt Salt-petre, and of white and pure Tartar, each one pound, of yellow Sulphur half a pound, make theſe matters into Powder, and having well mixt them, put them into a Cruſible, and by putting thereunto a live Wood-coal, kindle them, that they may take fire and burn up, and leave a yellow maſs behind in the Cruſible; which being molten in the fire, and turned forth into a Mortar, will give you a fiery ſulphureous Stone, biting the tongue by reaſon of its ſharpneſs. Now whilſt it is yet warm, powder it, for it preſently attracts (when cool) humidity out of the Air, and admits not of pulverization. Being powdered, pour thereupon two or three pounds of the beſt Spirit of Wine, and ſet it by in a cold place for ſome days, but with this proviſo, that you daily ſhake or ſtir your matter in the Veſſel with the Spirit of Wine: By this means will the Spirit of Wine attract a red Tincture out of the Sulphur, and will withall acuate it ſelf with the Salt, by the Calcined Tartar, then filter this Spirit of Wine by Cap-paper or a Filter, as they call it, and draw off two third parts by diſtillation in a B, that ſo you may have your Spirit again, but of a very pleaſing taſt and ſmell, which it gets out of the Sulphur, as out of the Center of all odour.

This Spirit of Wine, having the following Spices and Flowers ſteeped therein, and being again diſtilled off in a B, will give thee an efficacious Cordial Spirit of Wine, which ſaid Spirit you may colour red, with the Tincture of the Gold, and by the appoſition of as much of the Atoms of the Gold as is ſufficient, make it Aureous. Now as much as there ſhall be in quantity of this ſame Spirit, you may thereto afterwards add ſo much ſweet volatile Spirit of Gold, as will allay the overmuch heat of the ſaid Vinous Spirit. But that this yet overmuch heat may be yet more allayed, and that the ſtrong odour it ſelf of the Aureous Spirit may be corrected, you may therein diſſolve about ſome four ounces of Sugar-candy beaten into fine Powder, and this will make this truely Aureous *Aq. Vitæ* moſt ſweet. This moſt incomparable *Aq. Vitæ* may be uſed in all the Sickneſſes of the Body moſt ſafely and moſt profitably where the Vital Spirits the Heart and Brain need ſtrengthening. For the Aromatical Spirit of Wine doth even *per ſe* corroborate the Vital Spirits, and now the Spirit of Gold makes it more potent and effectual, and the Atoms of the Gold too, doth render it yet more vertuous, inſomuch that this *Aq. Vitæ* bears away the Bell from all others, nor can a better and more powerfull be prepared. For not onely the red Tincture of the Gold, but likewiſe even the Gold it ſelf being thus turned into Atoms, is conſtrained to undergo the concoction and digeſtion of the Stomach of Mankind: And therefore where 'tis uſed, the Excrements are generally black, which could not be if the Gold paſt forth again undigeſted. Seeing therefore it is an undoubted truth, that it is thus overcome and ſubdued by the Stomach's digeſtion, it cannot be but that by its moſt wholſome operation it muſt needs prove helpfull to the ſick body. Beſides too, I think it not amiſs to tell you, that the very Excrements (ſave your preſence) of thoſe ſick Patients that daily make uſe of this *Aq. Vitæ*, are not to be thrown away, for they will even yet afford ſome ſmall benefit, if they are laid to the roots of Vines to dung them with, for it will make the Vines produce ſuch Grapes as have their Stones ſpeckled with little Golden Stars, as my ſelf have tried. And perhaps ſomething of greater moment may be effected in the Metallick trade by ſuch kind of Excrements, though I confeſs 'tis needleſs, ſeeing good may be done upon them by other ways.

The Spices and Flowers which are to be extracted by the aforeſatd Alcolizated Spirit of Wine, and to be uſed in the *Aqua Vitæ*.

TAke the Flowers of the Lilly of the Valley three ounces, Of Red Roſes, Cinamon, Mace, Cardamoms, Borage, Roſemary, Sage, Lavender, two ounces, of Ambergreaſe, Muſk, a ſcruple. All theſe Flowers freſh gathered are to be put, with the dry Spices, into the Spirit of Wine, and are to be therein macerated, and then diſtilled. If you can't get freſh Flowers, you muſt even content your ſelf with dried ones, but yet the freſh-gathered are better if they can be had.

The Uſe of the Univerſal Medicament deſcribed in my ſecond Dialogue.

THE vertue and efficacy of this Medicament is of ſuch a large extent, as cannot be comprehended nor apprehended by humane underſtanding. It is prepared of the immature, and as yet volatile, and not fire-brooking Mineral, called by the Philoſophers the *Magneſia* of *Saturn*.

When this black Mineral is purged from all groſs impurity, and reduced into a moſt white and delicate Colour, and is in the form of a moſt delicate, fine, bright, and very ponderous Powder, it may be uſed with notable benefit about the curing of the moſt grievous diſeaſes. It caſts forth out of the Body of Man all hurtfull things, and that both by a viſible and inviſible operation, freeing and purging it of all hurtfull and ill humours, beyond all other Medicaments, what name ſoever diſtinguiſh't by. It ſhews incredible Vertues in a very little Doſe, inſomuch that there hath not been found hitherto any Medicament, which being exhibited in ſo ſmall a quantity, hath ſhown ſuch incredible efficacy. And although Antimonial Medicines are notably vertuous, and cauſe every one to wonder at them, as appears by my Golden *Panacæa*, and my *Panacæa* of Antimony, which for this twenty years ſpace have been famous all over *Europe*, yet can they not be in any caſe compared to this Univerſal Medicament.

1. For firſt of all, they are far inferiour in virtues to this, for one grain of this will do more than two, three, or four grains of the other can effect.

2. Secondly, this is heavier and more ponderous than the others, for one ounce of this will lie in leſs room than three, four, or five times as much of my Antimonial, or of my golden *Panacæa*, and therefore is it much eaſier and more commodious to be taken by the Sick.

3. Thirdly, this is alſo to be preferred before the others if you conſider them as to taſt and ſmell, for this hath neither odour nor taſt, whereas that Antimonial and the golden *Panacæa* have always ſome odour and taſt of the Salts, and for that reaſon do breed a nauſeate and loathing in the Sick if often uſed.

Therefore I have determined with my ſelf to ſubſtitute this univerſal Medicament, in the room of my *Panacæa* made of Antimony, and the rather for this reaſon, becauſe Deceivers and Cheaters have made a red Powder of Antimony, and perfidiouſly ſold the ſame for my *Panacæa*; but now this deceit of theirs muſt end, for they will never be able by all their deceitfull imitations to counterfeit this ponderous Medicament void both of ſmell and taſt.

As for the Doſe of this Medicament, there muſt care be had that ſcarce one quarter part ſo much of it, be adminiſtred as is wont to be of my *Panacæa* of Antimony. There muſt ſcarce be given the tenth or twelfth part of one grain at one time, to ſuch Infants as are under ſix Months old, and which are afflicted with the Epilepſie or Convulſions, the Small Pox or Meaſels, the Feavers or ſuch like Diſeaſes. To ſuch as are upwards of ſix Months, even to 12, 13, or 24 Months old, an 8th. 6th. or 4th. part of a grain may be adminiſtred, to ſuch as are 2, 3, 6, 8, or 10 Years old, $\frac{1}{4}$ or $\frac{1}{3}$ part of a grain may be given. To ſuch as are upwards of 10, even to 20 years old, $\frac{1}{2}$ a grain, or $\frac{3}{4}$ or at utmoſt but 1 whole grain may be adminiſtred. Thoſe that are between the 20th. or 50th. Years of their age, may uſe 1 grain or 1 gr. and $\frac{1}{2}$, nor muſt they exceed 2 grains at moſt. From the 50th year, all the reſt of their age even to their lives end, the Doſe of this univerſal Medicament is to be again leſſened, for old age is not able to brook ſo much as youth, and as a Man in the prime of his years can. But however you may adminiſter this ſo notable an univerſal Medicament to every age, pleaſantly, ſafely, and without any danger at all, if a due Doſe be but obſerved: Inſomuch that you need not fear to adminiſter the ſame even to Women with Child. But yet the leſſer half part of the Doſe which other Men uſe is enough for them. In Feavers it muſt be given afore the Fit, in the Plague as ſoon as it's felt and afterwards too, in the Dropſie once (or if that one Doſe be not ſufficient) twice every month; in the Gout and Stone twice a Week; in the Leproſie, French Pox, and ſuch like Diſeaſes as ariſe from the impurity of the Bloud, thrice a Week, in obſtructions of the Milt, Liver, Meſentery, once a Week; in the Epilepſie, Madneſs, and other preternatural affects of the Head, let it be given twice a Week, and this ſo long till the evil be quite removed. The affects of the Chollick will need a Doſe every day before they ceaſe. This is the manner of curing the aforeſaid Diſeaſes of the Body and all others, by the help of this univerſal Medicament. Which being uſed inwardly performs things incredible, and doth likewiſe work admirably in all dangerous wounds, open or running Sores, as well old as new, the Cancer, Fiſtula, and the like.

Being inwardly taken once in eight days it conſumes all untoward Salt Humours, and hinders them from running to the Wounds or Sores, and making them by that means worſe and more dangerous. But yet you muſt likewiſe apply externally excellent Balſams and Emplaiſters, ſuch as are mentioned in my third Century, that ſo the Wounds and Ulcers being duely purged, may admit of help by the applied Remedies and be the more eaſily cured.

This alſo is to be conſidered in the uſing of this Medicament, the Sick is to lie in his Bed four or five hours at leaſt after he hath taken it, nor muſt he either eat or drink all that time, and he muſt abide all that day in Bed, or at leaſt in his Chamber, for the avoiding of the Air, nor muſt he ſleep afore the Medicament hath finiſht its operation.

The Vehicles which it is to be mixt with, and to be taken in, are Wine, Ale, the warm Broath of Fleſh, Syrups, Conſerves of Roſes, freſh Butter, roaſted Apples, and ſuch like. Neither is it amiſs to make a light Supper, and feed upon eaſily digeſtable Food, and which may make the Stomach more apt and fit for purging, the night afore you are to take the Medicine the next morning: And thoſe are Prunes, Rayſons, and other ſuch like Food, as by their laxative property make the tough and viſcous humours ſlippery and ſofter; when the operation is over, the ſick Patient is to avoid hard meats and ſtrong drinks, nor muſt he preſently ſtuff his Stomach therewithall, but rather uſe much temperance the next day after his purgation, and feed onely upon the Broaths of Herbs, as Chervil, Fennel, Spinach, and the like, whereby the Medicament may operate the more eaſily, but it will yet more readily perform its operation, if juſt at your adminiſtring it you add a Drachm of pure white powdered Tartar, and boil it with a Drachm of Sugar, or (which is better) ſome Manna, in ſome pure clean Water, and ſo drink it warm, which ſaid potion following after your Medicament firſt taken, is wont well to purge and cleanſe the Stomach and Inteſtines.

And this is the uſe of our Mineral Medicament, which if you do but accurately regard, there will no errour be committed, and the ſaid Medicament will (by its laudable operation) abundantly ſatisfie every ones deſires. But we have now ſaid enough of this incomparable Medicament in the form of a Powder. But if this Powder be reduced, by melting it into ſmall Stones of the colour of Milk, it then requires another way of uſing it. If therefore you would uſe one of the ſaid Stones, inſtead of the aforeſaid Powder, and purge and free the Body hereby from all hurtfull humours, you muſt then put it for ſome hours in a ſpoonfull of Wine, and ſo drink off the Wine, and it will effect the ſame operation, that the Powder is wont to do. But yet you muſt be wary in the uſe of theſe Stones, that you do not waſt and ſpend the ſtrength of the Sick ſo much, but that there may be but juſt as much as is requiſite for them, and as they can bear. But when their ſtrength is ſpent, you muſt put in a greater or leſſer Stone into the Wine to be imbibed; but an Infant is not ſo ſtrong, nor can bear ſo much as a ſtrong Man can, whoſe ſtrength is far greater. It is therefore neceſſary that thoſe, who deſire happily to cure the Diſeaſes of mankind by the help of theſe Stones do (for the firſt time) leave one of theſe Stones one, two, or three

hours

hours in the Wine, and then heedfully mind the operation of the ſaid Wine when drunk off. If the operation be to his mind, he may always obſerve that length of time, as it lay in the ſaid Wine. If the operation be leſs than what you would have it be, it may lie longer; if ſtronger and greater than what you would have it, it muſt lie leſs while in the Wine, and thus by this provident forecaſt may you ſo order it, as to have it juſt to your mind.

Now, although the uſe of this Medicament in the form of a Stone be far better than uſing it in the form of a Powder as being more pleaſant, and more gratefull, yet notwithſtanding it is better for him that cannot ſo accurately obſerve the uſe of the ſame, to make uſe of the Powder it ſelf, that ſo they may be the ſurer of what they do. But they that do know the way of uſing the ſaid Stones, they need not uſe the body of the Powder, foraſmuch as they who drink that Wine wherein the Stones are macerated, may have the fruition of the virtues alone, without the corporeity. Thoſe very Stones too, though they are ſeveral times ſteeped in the Wine, do not (I confeſs) loſe their virtues, but yet they grow leſs eſpecially if (for the ſtronger purgations ſake) they are boiled in the Wine which is poured upon them, for the boiling diminiſheth its little body, and leſſens the Stone. And theſe are the directions which concerns the uſe both of the Stones, and of the Powder it ſelf, in the taking away and purging out all the hurtfull and evil humours in Man's Body, both in young and old.

The body therefore being ſufficiently purged by our ſaid univerſal Medicament, it will be expedient (for the prevention of a relapſe) to obſerve a due Dyet, and to hold ſuch a Stone in their mouths a quarter or half an hour every day, which will attract unto it ſelf not a little vicious tough moiſture, out of the Brain and Stomach, which you are to ſpit out ſo often, and ſo long, untill there flows no more plenty of wateriſhneſs into the mouth. This attraction will much eaſe the Brain and Stomach, and free it from noxious obſtructions, and will take away the preternatural Appetite and Thirſt, and ſo may a Man expect his Dinner without any preternatural Appetite. For when the internal Veſſels of the Body of Man, as the Spleen, the Liver, the Meſentery, are obſtructed with tough humours, and the Stomach it ſelf is ſtuft with theſe obſtructions, inſomuch that for ſome hours after his riſing out of his Bed, he is uſually troubled with a preternatural Hunger and Thirſt, and with a debility and faintneſs of his Members; many think that theſe inconveniencies can be averted by Food and Drink, but they are out. For experience teacheth that the weakneſs of ſuch Men is increaſed by eating and drinking a little, ſo far is it from being capable of being removed and taken away by ſuch means.

From whence it is clearly manifeſt that that weakneſs is not to be imputed to the want of meat and drink, but rather to the obſtructions of thoſe inward Veſſels, which hindring the paſſage of the Vital Spirit to the Nerves, which it ought to ſtrengthen, doth of neceſſity cauſe ſuch a debility and weakning of the Members, and begets in the Stomach a preternatural Appetite. If therefore ſuch obſtructions be by little and little taken away by the daily uſe of theſe Stones, ſo that thoſe tough humours cannot encreaſe, it muſt neceſſarily follow, that the Diſeaſe muſt give place by little and little too, and be diminiſhed and conſequently the former good health muſt follow with a prolongation of the Life.

The Stomach therefore being beſet with ſuch tough and Melancholy humours, it cannot poſſibly be that they ſhould ſo very eaſily be expelled, but 'tis behoovefull, that the Wine wherein the Stone hath been boiled be drunk, and ſo caſt them forth: And that Stone may be afterwards held in the mouth (according to the aforementioned way) for conſervation ſake of health. But if it ſhould happen that thoſe tough humours of the nauſeate and weak Stomach, and thoſe clammy obſtructions of the Veſſels, and that preternatural Hunger and Thirſt ſhould not be taken away by this way of healing; 'tis a ſign that all theſe inconveniencies have a deeper rooting and cannot be thoroughly removed by the ſaid Medicaments. And therefore ſuch Remedies as are ſtronger and more powerfull are to be made uſe of, which may ſoften thoſe tenacious humours of the Stomach, may incide them, and caſt them out, and may unlock all the obſtructions of the body, and open the paſſages of the Vital Spirit, to enter unto all the Members, and may ſtrengthen the weakned Stomach, whereby it may be capable of concocting the meats it takes, with a laudable digeſtion, and generate good and laudable bloud.

Foraſmuch therefore as ſuch an efficacious Medicament as is fit to take away all the obſtructions of the inward Bowels, and Veſſels, and to corroborate a weak Stomach, is to be found but with a very few, it hath ſeemed good unto me, to reveal at preſent ſuch a Medicament (for the ſake of mankind) and which is ſo efficacious a Remedy, as I dare boldly affirm the like thereof hath not for above theſe hundred years laſt paſt been in the hands of any Phyſician, but was found out by my ſelf by divine inſtinct, and which I here publiſh with a willing mind.

The Preparation thereof is as follows.

TAKE of new and ſtrong ſmelling *Myrrh*, and of the pureſt and cleareſt *Aloes*, and of the beſt Engliſh *Saffron*, of each one, two, or three ounces. Beat them all into Powder, and pour thereupon the ſtrong, operative, and *volatile Spirit of* Mars, (of which I have made mention in my Book of Fires) and diſſolve as much thereof as will diſſolve, to the Solution add a little of my *ſecret Ferment*, which will preſently cauſe it to ferment. Now before the putting your ferment thereunto, you muſt have an Alembeck or Head ready at hand, and Paper and Paſt wherewith the Alembeck being put upon the Body, may be well luted, and ſuffer nothing to paſs out.

For aſſoon as ever the Ferment, ſhall be added to the Solution, it preſently begins to ferment, and the glaſs being placed in Bal. and feeling the heat, that volatile Spirit of the Iron will aſcend readily and nimbly like the Spirit of Wine, much inferiour thereunto as to its heat I confeſs, but yet of a far more penetrating efficacy. The Spirit being all aſcended the remaining humidity is to be drawn off even to the conſiſtence of honey, but yet ſo gently, that the remaining Juice may not at all ſmell of burning. This done, take out the glaſs and let it cool, and pour on upon the Juice after its refrigeration the ſame volatile Spirit of *Mars* which you ſeparated from the matter by diſtillation; which Spirit will diſſolve that thick Juice, which being

ing diſſolved will become a Balſam of a ſtrong Odour, a penetrating Efficacy, and a red Colour like bloud; which (by reaſon of its penetrative Efficacy) is to be kept well ſhut, and may be accompted of as a Balſam of Life; for it takes away the obſtructions of the whole body, and doth mightily corroborate and ſtrengthen all the internal Veſſels and Members, and preſerves them ſafe from all corruptions. Nor is there any Balſam whatever, being brought whenceſoever it will, that is comparable unto this. For it does not onely defend the living bodies of men from all Diſeaſes, but likewiſe performs the ſame effects in the preſervation of the dead bodies from putrefaction, as other Balſams do, but far more efficaciouſly: For it penetrates all things, and by its ſo admirable vertue keeps them from putrifying, inſomuch that no body can enough admire theſe ſo great and wonderfull works of God. Now to try the truth of this, any man may make proof thereof with a Frog, Mouſe, or ſuch like ſmall Creature.

The uſe of this ſame Balſam as to the taking away of all the obſtructions of the internal Veſſels, and corroborating the weak Stomach, is this, *viz.* The body is firſt of all to be well purged, and then 1, 2, 3, 4, even to 10 or 12 drops thereof (according to the Age of the Patient) is to be adminiſtred to a faſting Stomach, in that Water, which was drawn over after the volatile Spirit was all come, as aforeſaid.

After the taking of the Medicament, you muſt faſt an hour or two, this Balſam penetrates all the Members of the whole Body, and ſtrengthens the Stomach, Brain, Heart, and all the internal Veſſels, takes away all obſtructions, makes good blood, excites a good appetite to meat and drink, and augments the radical humidity, and ſo conſerves the body of man (by God's Grace and Bleſſing) even unto old Age.

But let it not ſeem to any one a ſtrange thing, nor let them ſuffer any ſuch thoughts to come into their minds, as if others have already had this Balſam, becauſe *Paracelſus* made his *Elixir Proprietatis* of Myrrh, Aloes, and Saffron, and ſo others too inſiſting on or tracing his footſteps have made the ſame, and which hitherto hath been in great eſteem amongſt all skilfull Phyſicians; no, no. That *Elixir* of *Paracelſus*, being as yet in its corporeal form, and being nothing elſe but the meer body, is far ſhort of the Vertues of my Balſam; for my Balſam of Life excels, by reaſon of its moſt efficacious Spirits, which penetrate the whole body of man, and fills all his Spirits, and even the whole body it ſelf with its moſt pure vertues, corroborating the ſame, and driving away all corruption and rottenneſs.

Farther, if any one be minded to make this Balſam of Life yet far more efficacious and powerfull, he may inſtead of the aperitive Spirit of *Mars*, uſe the Spirit of Gold, which queſtionleſs will enrich the ſaid Balſam with far greater vertues, but then the coſt will be the more, ſo that this Medicament will be fit for the rich onely. A man may alſo in the preparation of this Medicament, preſerve the volatile Spirit apart, and uſe the ſame as a ſpiritual Balſam, or *Elixir* of Subtilty, for the conſerving of the inward parts of the body, and ſo thou wilt moſt potently diſſolve (by its more penetrative, more potent, and more efficacious vertues, all hurtfull obſtructions, and all the moſt clammy and tenacious humours. And after the ſame manner may you reſerve the ſimple Balſam apart for its proper uſe.

Now by this way which I have here delivered, may be made likewiſe other efficacious and penetrating Spirits and Balſams of great worth, out of other Animals, Vegetables, and Minerals, wherewith a man may perform wonderfull effects in Medicine. I have here laid a foundation, whereupon every one may as he thinks good build a ſtrong Edifice. Nothing verily would be more deſirable, and more to be wiſht for, than to ſubſtitute, and introduce ſuch ſubtil and penetrating Medicaments, in the room of ſo many unprofitable compoſitions made by their boilings and ſtewings, *&c.* It would be far better for the health of mankind, nor would ſo many men die, remedileſs, of ſuch ſmall and contemptible Diſeaſes as ariſe meerly from the tenacious and pituitous humours of the Stomach: What vertues I pray can there be in the common diſtilled waters of herbs? Verily ſcarce any at all. But if they be prepared according to the way by me preſcribed, they would be (both in odour, taſt, and vertues) much better and more profitable.

If to ſome common Wine, which hath already undergone its natural and accuſtomed fermentation, there be another fermentation given it by the help of my ſecret ferment, and then the Spirit thence extracted, it will be of ſo ſtrong and efficacious a ſavour and odour (eſpecially if ſome Spices, and other ſweet ſmelling fragrant Herbs, be fermented together therewith) as that other Wines may be thereby rendered ſavoury and well taſted, and odoriferous too. Upon this account I dare boldly and conſtantly aver, that the Spirits of Metals deſerve the chiefeſt place in Medicine above all other things whatſoever: But I do not as yet know what may be done with them in metallick matters, onely thus much, *viz.* they are wont to coagulate the common and running Quickſilver. Did we but know the Art of fixing them (Spirits) and making them conſtant, without queſtion we ſhould not onely obtain an excellent univerſal Medicament in medicine for the conſervation of the health of mankind, but alſo a moſt abſolute Tincture for the tinging of the bodies of the metals. That this is poſſible, the Writings of the Ancient Philoſophers do too and again hint ſo much, but yet I have not as hitherto effected the ſame. However I am content, and moſt heartily thank my God, in that he hath honoured me with ſo excellent a Medicament, which haply no body for this hundred years laſt paſt hath been rendered a partaker of: For had it ſo been, it would long ſince have been revealed and diſcloſed. 'Tis not a Boys play nor ſo very mean a thing, to bring not onely Vegetables and Minerals, but even the moſt fixed metals themſelves, in (as it were) a moments time, to ſuch a paſs, as to undergo a fermentation, and to yield (by diſtillation and rectification) ſo ſtrong and penetrative a Spirit; believe it or not believe it, all's a caſe. 'Tis enough for me that I can perform the ſame whenſoever I pleaſe; which thing the incredulous ſhall very ſhortly, (God willing) find to be moſt true, and ſee it with their Eyes, and feel it with their hands. But however, by the ſame way, as the aforeſaid Balſam is ordered to be prepared, may various and unknown effectual Medicaments be made out of other matters.

A Preparation of *Opium* would yield ſuch a Spirit, as (by its odour) would procure reſt, and lay the exteriour Senſes aſleep.

The like would Tobacco, or Henbane, and other ſuch like Herbs effect, and ſo would the other inebriating Herbs, whoſe Spirit being mixt (even in the leaſt Doſe) with Wine, or Ale, and ſo drunk off, would preſently make a Man drunk. By the help of ſuch kind of Spirits might many waggiſh tricks be done, as for example, If Barley, Peaſe, Beans, or other Seed and dry Fruits were moiſtened or ſteeped in the ſame, and thrown to Fiſhs, Birds, and other wild Animals, and they eat of the ſame, they would be made ſo drunk, as that you may take them with your hands. In like manner, by ſuch kind of Spirits emitting ſuch a ſtrong odour, may all miſchievous wild Beaſts, as Bears, Wolves, Foxes, and other ſuch ravenous Creatures be driven away; and on the contrary, may Fiſhes diſperſt in the Waters be gathered together into one place. For they (*viz.* the Beaſts) ſhun all ſtrong odours and ſtinks, but theſe (*viz.* the Fiſhes) are wont to follow after them in the Water.

Briefly, and in a word, thoſe aforeſaid Spirits would be fit for the effecting of ſuch wonderfull concluſions, as is no ways fit ſo much as once to mention, much leſs to reveal and make known the ſame. And for this reaſon I have determined with my ſelf to bury this ſo great a Secret of Fermentation with me in my Grave, and not to diſcloſe it to any one. In the mean while I will take care to provide a ſufficient plenty of the beſt Medicaments, whereby I may be ſerviceable unto my Neighbour. And I will omit taking care about other needleſs affairs, unleſs it ſhould chance to happen, that that Turkiſh Tyrant thirſting after nothing but Bloud, ſhould approach too near unto us (which God forbid) againſt whom my wonderfull and hitherto unknown Artificial Fires, and other new inventions of mine, ariſing from my unwearied Labours, will be of ſuch reſiſtance, as that I am confident his numerous hoſt will be rid of the care of again returning back. For it is beyond all kind of doubt, that ſuch fiery Globes [or Granadoes] may be made, as for one pound thereof to exceed the violence even of twenty pounds of Gunpowder. And who knows for what cauſe God hath vouchſafed the revealment of ſuch great Secrets, at this nick of time? Perhaps to ſhew his Omnipotency, he will effect ſome ſingular and admirable work for the freeing of the Chriſtian World by this ultimate and extream defenſive way, out of the moſt preſent and imminent dangers: And though it (*viz.* the Chriſtian World) be immerſt and even drowned in the Labyrinths of various Errors, and is gone greatly aſtray from a true Chriſtian-like life, yet notwithſtanding it doth yet contain many a pious Soul. Never did God make, or vouchſafe ought without a cauſe; And therefore it is altogether credible, that theſe new inventions did not light into the hands of men in vain, the which time will manifeſt.

The Explication of the two Circular Figures of the Quinteſſence at the beginning of this Fifth Part of the Pharm. Spagyr.

ABout the Circle of the firſt Figure. *The Quinteſſence of the Minerals, is a Univerſal Medicine.*
Without ſide the Square in the Circle. *Separate the pure from the impure.*
Within ſide the ſame Square. *The four Elements.*
In the four Angles of the Square. *Fire, Air, Water, Earth.*
Without ſide the Triangle. *The three Principles.*
Within the three Angles. *Salt, Sulphur, Mercury. Make the fixt Volatile.*
Within the Circle, in the Triangle. *Two Contraries.*
Within the Central Circle. *The firſt Ens.*
Which if you begin to read in the Center, the ſenſe will be thus. *From the firſt Ens, proceed two Contraries; from thence the three Principles; from them the four Elements; from which, if you ſeparate the pure from the impure, you obtain the Quinteſſence, which is an Univerſal Medicine.*
About the Circle of the ſecond Figure. *The Salt of Metals, is the Stone of the Philoſophers.*
Without ſide the Square in the Circle. *And bring it unto Maturity.*
Within ſide the ſame Square. *The four Elements.*
In the four Angles of the Square. *Fire, Air, Water, Earth.*
Without ſide the Triangle. *The three Principles.*
Within the three Angles. *Salt, Sulphur, Mercury. And the Volatile, make fixt.*
Within the Circle of the Triangle. *Diſſolve, Coagulate.*
Within the Central Circle. *The primum Mobile.*

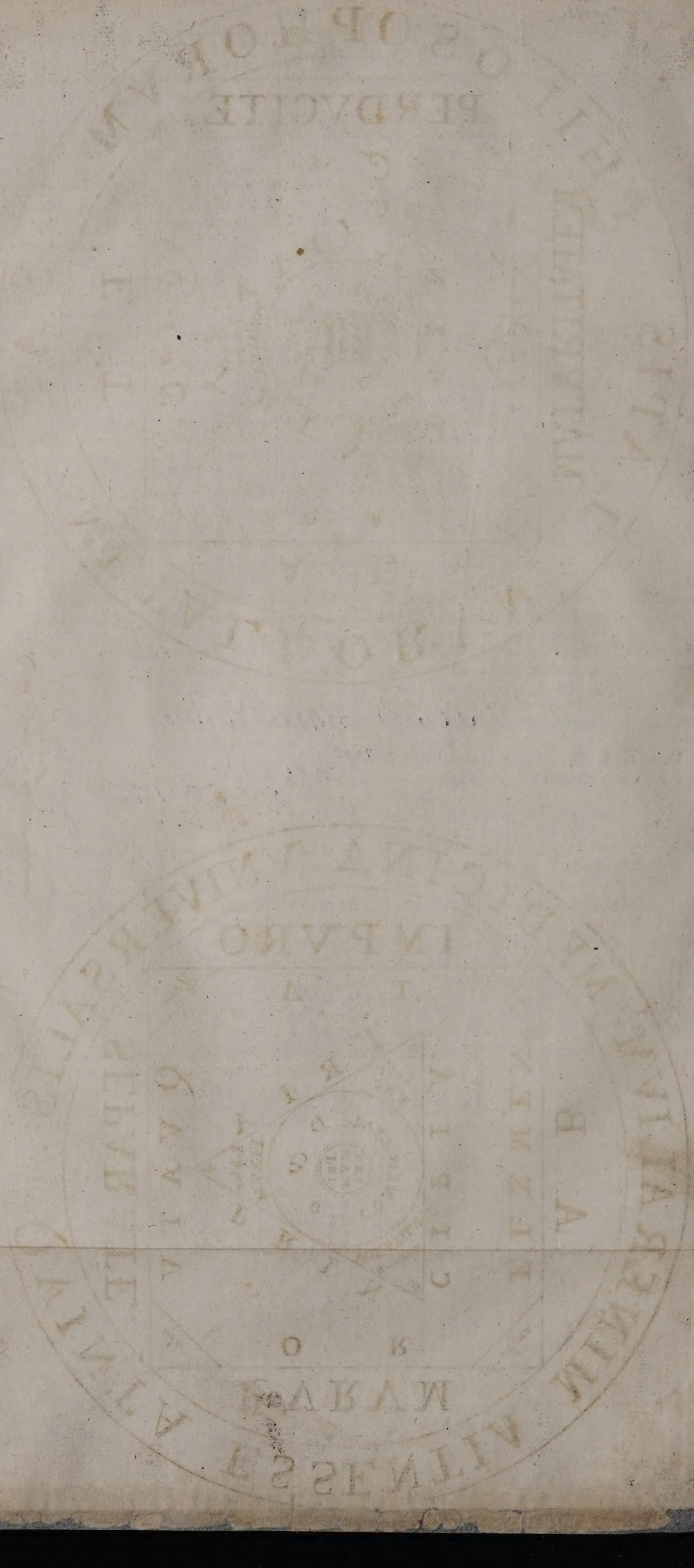
To underſtand the Scope of thoſe two Figures, you are to begin with the firſt, in the Center, and next read the Center of the ſecond, for they anſwer one another in all their Parts. As in the Center of the firſt Figure are theſe words: *The firſt Ens.* Which in the Center of the ſecond is, *The primum Mobile.* And ſo on to all the other parts.

The End of the Fifth Part.

THE

Thomas John Tresidder Cornfield
Penryn Cornwall
Dec: 5th 1835

Quinta Essentia in die Pharmacopoea Spagirica.



THE SIXTH PART OF THE Spagyrical Pharmacopœa.

Or a Light lately riſen, and a ſtrong Key for opening Philoſophick Verity, treating of the moſt ſecret Fire of Philoſophers, *viz.* How it is to be uſed profitably and commodiouſly for the preparation of many Royal Medicaments; and how, by the benefit of it, *Vegetables*, *Animals*, and *Minerals*; venemous, fœtid, noxious, and wholly adverſe to Humane Nature, may be converted into a gratefull and moſt ſalubrious Medicine, Mineral-Salts, and the Corroſive Spirits of them dulcified; and fixed Metallick; Bodies tranſmuted into Volatile Spirits. As alſo how theſe Volatile Spirits may again be changed into Bodies fixed, tinging, and penetrating through every Metal and Glaſs, and other rare things of that kind may be performed.

READER,

I did ſome time ſince, ſincerely diſcover to certain of my Friends, ſome of the beſt of the Arcanums *(deſcribed now publickly) in this Treatiſe, with ſuch condition as they themſelves ſhould prepare the ſame: but they have not as yet ſet about the Work, and perhaps for no other reaſon, than becauſe they thought it a matter not of great but of ſmall moment. Hence it was, that they could not believe ſo great a Medicine could be prepared in ſo few days. It is manifeſt by the Writings of Philoſophers, that* Maria *the Propheteſs, Siſter of* Moſes, *could ripen the Stone of Philoſophers in three Days. Likewiſe, ſome Philoſophers have abſolved their Work in a Week. Others have conſumed ſome Months labour upon the ſame. But now, thoſe erroneous Fellows (who run from one to another, and although themſelves be rude and ignorant of all things, proffer their labour for reward to make the Stone of Philoſophers) require to themſelves for digeſtion the ſpace of one, two or three whole years. But what a vaſt difference is there between three days and three years. As for my ſelf, I indeed as yet have never elaborated ſo great a Work, but have ſeen with my Eyes ſo great a poſſibility thereof, and with my hands handled things ſo, as (if time and place be given, and God grant ſucceſs) I am confident I ſhall prepare this ſupream Medicine in a very ſhort ſpace of time. But I can truly affirm, that in all my life I never aſpired to things ſo high; yet what hath been conferred on me by God, I now make common. Wherefore, he (whom God ſhall favour) may there begin, where I have ended, and happily conſummate the Work: but if he (whom God favours not) ſhall attempt any thing therein, let him not diſquiet me with troubleſome Interrogatories; for I know not how to anſwer more, than are here diſcovered by me. Yet (if God pleaſe) after ſome ſhort ſpace of time, I will clearly expoſe to publick view, whatſoever I have found and ſeen in the particular Melioration of Metals. Which indeed will contribute great Light to this later Age of the darkened World.*

CHAP.

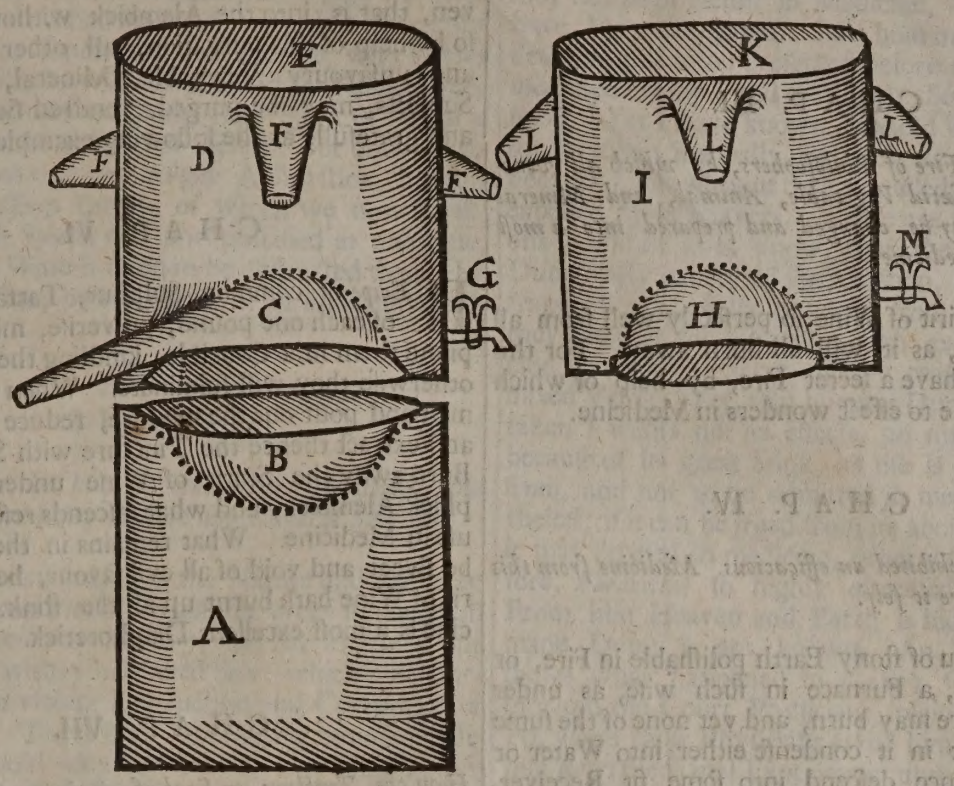
CHAP. I.

Describing that artificial Philosophick Distillatory Furnace (of which the little Book of Fires treats) by the help of which in the space of one hour, all Chymical Operations at one time, the secret Fire mediating, may be demonstrated so, as was never yet described by any Man.

GET a Furnace made of good Earth (which in burning will be rendred as compact and solid as Glass; such you may find about *Colen*, *Sibburg*, *Freichiem*, or *Waltenburg*) in its Diameter, at least two Foot broad, but rather (if that well may be) three. Prepare a Vessel like the Hemisphere or half-Globe, having three or four handles, to be hanged up by, fill that with cold Water, and your Recipient or Blind-head will be perfect. Then fit to it a plain Pan of good Earth, the breadth of three or four Thumbs, and a Thumbs breadth high. This Pan fill with common Sulphur, mixt with some other Mineral Subject, as *Mercury*, *Auripigment*, *Arsenick*, or *Antimony*; which you desire to fix, either particularly into *Sol*, or universally into Medicine. Kindle the Sulphur that it may burn, then this Sulphur will calcine and fix that subject (in the Fire continually burning,) which was put in to be fixed. If in burning the Sulphur be deficient, it must be supplied with other Sulphur. If the Sulphur should happen to be extinguished, you must kindle it again, that it may constantly burn and never go out. It will not easily go out, if you prevent the extinction, by putting a little Cotton in the midst of the Pan. When the burning Sulphur, with its penetrating and ripening Fire, penetrates the subject added, then the volatile Mineral at first cannot bear patiently the vehemency of the Fire, but a part of the same is elevated upwards with the fiery Oil (fixing all Mineral subjects) which concretes round about to the Vessel, and again distills down upon the burning Sulphur into the Pan, so as it excites no small admiration in the Beholders. The motion of this Oil, which is so often and long driven upwards and downwards; Philosophers have named their Distillation, Ascent, and Descent, also Cohobation and Circulation: but the Sulphur continually burning, they called Calcination and Solution. For, in this operation, two very potent Fires act. The flame of Sulphur is a strong fixing Fire, but stronger yet is that fiery Oil continually distilling. By the help of both which *Stygian Fires*, the volatile subject in the Pan, is in a short space of time (unless it was very impure before) without any diminution of its weight fixed into a fixed Medicine. It is to be admired, with how great virtue, either Fire is endewed, for fixing volatile Metals; also it is pleasant to behold, how (when any drop of that Oil of Sulphur driven upwards distills down again upon the burning Sulphur) the flame that ascends then, will be red as bloud, which otherwise from Sulphur onely ascends yellowish. The repeated Distillation of that into the under set Vessel was by Philosophers called Inceration: But when the whole resided in the bottom without any ascending fume, that was by them called Fixation.

These operations I have performed with my own Hands, and seen with my own Eyes. More at this time I dare not publish; for more than enough is already spoken to impious Men. Which indeed I should not have done, if this excellent Philosophick Work had not been made too common already, or (to express my meaning more plainly) if it had not fallen into the hands of unworthy Persons, to me most ungratefull. For indeed I permitted onely some few of my Friends to see this Philosophick fixing Furnace; yet the knowledge of it was by them so far divulged, as I repented I had ever communicated it. Nevertheless, instead of that, not long after by God was given to me a certain other, far better and more elegant gift, for he shewed me such an Instrument, as would far more commodiously than the former, receive the ascending sulphureous fume, so as none of it should be lost. Therefore this divine gift shall by me be more warily kept than the former.

THE



The Explanation of the CUT.

A *Is the ſtanding part of the Furnace.*
B *The lower Hemiſphere or half Globe, which is to contain the Sulphur, or what you intend to make into Oils or Spirits.*
C. *The upper Hemiſphere with its Pipe to draw the Oils or Spirits by.*
D. *The body that holds the Water.*
E. *The Cavity or top of the body to put in the Water.*
FFF. *The handles by which it is hanged up, which are made of the ſame Earth that the Body is made of.*
G. *The Cock to let out the Water, that you may put in more cold.*
H. *The Hemiſphere to work the Minerals and hath no Pipe.*
I. *The body to hold the Water to keep it Cool.*
K. *The Cavity of the Body to put in the Water.*
LLL. *The handles to hang it by.*
M. *The Cock to let out the Water that you may put in more cold.*

CHAP. II.

The way of preparing another Medicine of Sulphur onely.

FILL an earthen Pan full of Sulphur, and ſet it under the Blind-head. Kindle the Sulphur and keep it continually burning for eight or fourteen days. And when the burning Sulphur cauſeth its Oil to aſcend, and the ſame again deſcends upon it, and this aſcent and deſcent hath ſo long been made, as untill the Oil is fixed, and no more aſcent is perceived, then let the Fire go out, and that which you find in the bottom, looking black as a Coal, take out, pour clear Water upon it, and make them boil together. In this boiling the Water extracts the fixed Oil of Sulphur, which paſſed into Salt, from the black Fæces. This extracted Salt diſtill through a Filter, and permit the Water to exhale in *Balneo*; ſo the Reſidue will remain in the bottom ſweet, in the form of a ſoweriſh gratefull yellow Salt. Which take out, and put into a clean Crucible, where keep it hot, but not red hot; then the Salt will wax red. This diſſolve again and Filter, and it will leave ſome Fæces. You may reiterate this operation if you will, and the Salt will be ſo much the more pure. This Salt is of a middle taſt between ſower and ſweet: Of which five or ſix grains being taken inwardly will penetrate the body and ſtrongly provoke ſweat. But a larger Doſe will provoke gentle Seidges, eſpecially if the operation be made in ſome Iron Pan, yet it contracts from the Iron a ſweetiſh taſt, but that is not at all to be feared, becauſe the Salt plainly depoſits this taſt, eſpecially if you heat it hot and diſſolve it, coagulate and heat it hot again, unto the third time. For then it loſeth that taſt, and becomes a ſweet red Salt, which is a ſafe remedy againſt all Diſeaſes, where there is need of ſweating and purging.

Note, here is need of caution, that in making it hot, your Fire be not too ſtrong, and ſo the virtues of your Salt diminiſhed, which is a thing accurately to be minded. Ancient Philoſophers likened this operation to ſuch a Fire-vomiting Dragon, as devours his own Tail, and converts it into a ſalutary Medicine. The Dragon is burning Sulphur, his Tail is its fiery Oil, which ſlides down upon the burning Sulphur, and in it converts it ſelf into an efficacious Medicine.

Note, I would have you give credit to me, in theſe Works, which I here have opened in few words, are many things of great worth contained. Therefore, if you be wiſe, you will more diligently ſearch into

the matter, and find out much more than is here diſcloſed by me.

CHAP. III.

Another ſecret Fire of Philoſophers, by which all venemous and fœtid Vegetable, Animal, and Mineral Subjects, may be changed and prepared into a moſt efficacious Medicine.

REctifie Spirit of Wine ſo perfectly well from all Phlegm, as it will all burn away. For this way you will have a ſecret Fire, by help of which you will be able to effect wonders in Medicine.

CHAP. IV.

Where firſt is exhibited an efficacious Medicine from this Vegetable Fire it ſelf.

PRepare you of ſtony Earth poliſhable in Fire, or of Metal, a Furnace in ſuch wiſe, as under it a flaming Fire may burn, and yet none of the fume fly away, but in it condenſe either into Water or Oil, and thence deſcend into ſome fit Receiver. Under ſuch a Furnace, in ſome earthen Pan kindle an ounce or two of this ſubtile Fire, and let it burn. The Spirit of Wine being burnt, the volatile Salt as incombuſtible (yet the volatile Mercury of the Wine) comes forth, is cooled in the Receiver, and ſo preſerved.

Note, when the firſt Spirit of Wine is burned, more muſt be put in. Of how great profit it will be in Medicine, you may eaſily judge, becauſe it is the immortal and incombuſtible Soul of Wine. How much it is able to effect in Alchymy, is not very well known to me, I not having laboured much in it as yet. *Baſilius* touching this Mercury, thus Writes: Whoſoever can obtain it, will be a principal Maſter in Chymiſtry. He, as I judge, well knew how from Gold its Tincture was to be extracted by the help of this. But of theſe enough at this time.

CHAP. V.

How by the benefit of this ſecret Vegetable Fire, the Microcoſmick Mercury may be corrected, freed from its nauſeous ſtink, and converted into a ſweet Medicine.

REctifie Spirit of Urine as highly as you can, according to my Preſcripts, largely deſcribed in the Book of Furnaces. To this Animal Mercury add five fold or ſix fold its weight of our Vegetable Fire, with which fill a Pan, and kindle this Fire under our Philoſophick Alembick; then will our Fire burn up all the nauſeous ſtink of the Animal Mercury, ſo as it will aſcend with a gratefull odour and taſt. If it be not to your mind the firſt time, commit the ſame to this purgation a ſecond time, and make it paſs over; then you will find your Animal Mercury ſweet, by virtue of which you will be able to do great things in Medicine, becauſe it forcibly penetrates. Therefore a diligent Phyſician ſhould not be ignorant of the uſe of this. It is known that Spirit of Urine doth much good in Medicine, yet it is commonly abhorred by reaſon of its unpleaſant taſt. But when it hath ſuſtained the trial of our Philoſophick purgation, then it aſcends into its Heaven, that is, into the Alembick without ſtink. Alſo by help of this purgation, all other fœtid, bitter and unſavoury Vegetable, Mineral, and Animal Subjects, may be purged, rendred ſweet, pleaſant, and gratefull, as the following examples will prove.

CHAP. VI.

R*Ecipe* of common Sulphur, Tartar, and Niter, of each one pound, pulveriſe, mix and decrepitate them in a Crucible, kindling them on the top, otherwiſe they will fulminate. When decrepitated, melt and pour out the mixture, reduce it to Powder, and extract thence the Tincture with Spirit of Wine. Burn away the Spirit of Wine under the Philoſophick Alembick, and what aſcends reſerve for your uſe in Medicine. What remains in the bottom will be ſweet and void of all evil ſavour, becauſe the Spirit of Wine hath burnt up all the ſtink. This Medicine is a moſt excellent Diaphoretick.

CHAP. VII.

How the Tincture or Soul of Antimony may be purified by the benefit of this Vegetable Fire.

R*Ecipe* of Antimony, Tartar, and Niter, of each alike; decrepitate, melt, pulveriſe, and extract the Tincture, which cauſe to paſs through this Purgatory Fire, and you will have a ſafe Medicine againſt all Diſeaſes. But if you would render it yet more excellent, to this Antimony (which hath already once ſuſtained that Purgation) again add its own weight of Tartar and Niter; decrepitate, melt, extract, and cauſe it to burn as before, and you will have your Medicine more excellent. And if you ſhall repeat this labour the third time, you will have it far more excellent, for every time there are ſome Fæces depoſited, whence the Medicine becomes more efficacious.

As is ſaid of Sulphur and Antimony, ſo alſo all other ſtinking and bitter Subjects; yea the ſtinking Dungs of Animals may be ſo purified as to become ſweet. But there is no neceſſity to ſpeak hereabout in this place. For whoſoever ſtudiouſly ſearcheth for ſome famous Medicine, will eaſily find ſome excellent thing, ſo as he may attain both Riches and Honour according to his wiſh.

CHAP. VIII.

How by help of the Vegetable Fire, Mineral Fires may be extinguiſhed, and the corroſive fiery diſpoſition of them converted into ſweetneſs.

IT is very well known, that the greater common Fire doth always (as often as one is ſet near the other) either extinguiſh the leſſer, or cauſe it to languiſh, the ſame alſo happens to Philoſophick Fires. As for example, Put into a Stone diſh or Pan, Spirit of Salt, Vitriol, Niter, or Sulphur, or ſome other acid Spirit, and three, four, or ſix parts of the beſt Spirit of Wine which kindle, and the Spirit of Wine will burn away, but the acid Spirit through the ſubtilty of the flame becomes ſweet. Which ſweet Spirits, eſpecially that of Sulphur and Salt,

manifeſt

manifeſt great Vertues in Medicine. *Baſil Valentine* ſpeaks of the dulcified Spirit of Salt, that it extracts from Gold its Tincture; and that he, who knows how to dulcifie it, will be honoured by Philoſophers. He in like manner teacheth, that Spirit of Wine is ſeven times to be abſtracted thence: Yet undoubtedly he intended not the vulgar Abſtraction, but this ſecret Abſtraction rather, of which we now ſpeak. Becauſe ſuch Spirits are not dulcified at one time, but Spirit of Wine is often to be abſtracted thence by the help of Fire, before they will be ſufficiently dulcified.

CHAP. IX.

Another way, by help of other Fires, to cleanſe and ſweeten Vegetable, Animal and Mineral Subjects.

EVery man knows, that the Nature and Property of common Fire is, to abſume every ſtinking Sulphur, to drive away *Mercury*, and leave nothing but dead Aſhes, with a little fixed Salt; which is no Correction, but a violent Deſtruction and Corruption of good things. Therefore, in preparing famous medicines, we ſhould uſe a better Fire, *viz.* ſuch, as neither conſumes Sulphur, nor drives away *Mercury*, but onely ripens, cleanſeth and ſweetens them; as will be proved by theſe following Examples.

Firſt let us make trial with the (to us abominable) Dung of men, and ſee, whether its Stink can be totally taken away, and of it an Univerſal medicine be prepared.

It is very manifeſt, that the Dungs of Animals crude and not prepared, are of ſome uſe in medicine, and we know they have been long in uſe with Galeniſts and Apothecaries: For they preſume to cure the Jaundies with Gooſe-dung; Feavers with Horſe-dung; Inflammations of the Bowels with the diſtilled Water of Cow-dung, which they call the Water of all Flowers; and the Quinſey, with the white Dung of a Dog, which they call *Album Græcum*. Pertinent to the purpoſe, Hiſtory makes mention of a certain Countryman labouring with a Quinſey. To this man a Phyſician gives a Bill, by which he was to go to an Apothecaries Shop, and buy *Album Græcum*. The Bill he gave to a Boy in the Shop, who having read it, looked into the Box in which *Album Græcum* was wont to be kept; and finding the Box empty, bid the Countryman ſtay a little, and he would ſerve him preſently. But the Boy not wiſe enough to conceal the Secret, runs preſently into the Church Yard, where he gathered ſome of the white Dung of Dogs, which he brought home, and put into his Mortar to pulveriſe. The Countryman ſeeing this, ſpake to the Boy thus: I pray thee lay aſide thoſe things, and give me what I have need of; for I can ſtay no longer. To which the Boy anſwered: This is that the Phyſician preſcribed you; therefore ſtay but a little while, for it will be beat enough preſently. Then the Countryman angerly ſaid: What do you ſay, you Whelp? Muſt I buy Dogs-turd of you for Silver? I have enough of that at home: Therefore you and your Doctour ſhall eat it your ſelves for me. And having ſpoken thus, he went out of the Apothecaries Shop in a great rage. Many ſuch Hiſtories are variouſly commemorated: by which you may clearly ſee, that the Dungs of Animals, although crude and not at all prepared, have been uſed by Apothecaries. All which had they not been uſefull in Medicine, would long ſinc have been abrogated. But humane Dung, which deſervedly is to be preferred before all other, is not uſed medicinally; and that onely becauſe of its evil ſmell. Yet I have known ſome old Women give that to be taken inwardly by ſuch as laboured with Feavers (but without their knowledge) and ſo have expelled thoſe Feavers. There are ſome Chirurgeons ſo skilfull as to know, that the Salt of humane Dung onely generates Putrefaction, but on the contrary all other Salts preſerve from it. Wherefore they uſe that for putrifying ſuch excreſcent Caruncles, as they fear to cut off, by reaſon of the intermixed Veins. Yet, that humane Dung (if inwardly taken) wants not its effects, no man doubts: but becauſe of its great Stink, its uſe is to be abſtained from, and not to be admitted in medicine. Nevertheleſs, if it can be freed from its abominable Odour, it may be uſed in medicine, otherwiſe not. Wherefore, *Paracelſus* ſo highly eſteemed it, as he ſaid: From him Heaven and Earth is hid, to whom humane Dung is not known. An Hiſtory, which ſhews what happened in *Cæſar*'s Court, between him and the Court Phyſicians, plainly ſheweth this. For when thoſe Phyſicians asked him to leave behind him ſome medicinal Experiment unto them, *Paracelſus* ordered humane Dung to be brought and laid before them. They ſeeing that, went away in a rage and reviled him. But *Paracelſus* anſwered. You indeed run away, thereby proving your ſelves unworthy of the Secret I purpoſed to have diſcovered to you. Whence it is very manifeſt, that *Paracelſus* knew how to render ſtinking Excrements fit for uſe. For undoubtedly, he never adminiſtred them to any man, before they were prepared; becauſe he had other Medicaments always in readineſs. Now, that it may be known to be poſſible to take away the Stink of Dungs, I will prove the ſame by the following.

To a ſound and healthfull Man for two days together give nothing to eat, but a little well baked Wheat-bread; or to drink, but good Wine. His Excrements for theſe two days caſt away. On the third day let him eat a peculiar Bread, with which is mixed before it is baked about an Ounce and half, or one Ounce of my Blood of *Sol*; alſo let him have an Ounce and half, or one Ounce of the ſame Blood of *Sol* mixed with his Drink, that it may thereby be tinged with a red Colour. And all the third day let him eat nothing but this Bread, in which the Blood of *Sol*, or Gold rendered irreducible hath been baked, and uſe that Wine onely, which the Tincture of Gold hath coloured. Then on the fourth day, let his Excrements (which will be tinged with blackneſs like a Coal) be put into a glazed Pan or Diſh, yet with this Caution, that no Urine be mixed therewith; becauſe that will be injurious. Indeed theſe Excrements will have a very evil Odour, but that you may take away their ſtink, and convert them into an Univerſal Medicine, proceed thus.

If theſe Excrements be in weight one pound, or ſomewhat above, pour on them two Ounces of well dephlegmated Oil of Sulphur, or in defect of that, as much ſtrong and well rectified Oil of Vitriol; mix the whole well ſtirring it with a wooden *Spatula*, that the Oil may act upon the Excrements: Expoſe the whole to the Air for one Night; and that mineral Fire will calcine the Dung Philoſophically, and deprive it of all its ſtink, without any diminution of its Weight; which is very ſtrange. And if any part

of

of the evil Odour ſhould be left remaining, add to it again one Ounce and half of the Mineral Fire, and ſuffer them to ſtand together for one Day and Night. Then muſt you alſo have in readineſs the Animal Fire, *viz.* Spirit of Urine exactly rectified, of which pour leiſurely and by degrees upon the Dung, ſo much, as until both thoſe contrary Spirits ceaſe to act each upon other, and are ſtill: For then thoſe two contending Fires have mortified each other, whence a middle Salt is generated. Upon this mixture put into a Glaſs do you alſo pour ſo much of the Vegetable Fire, (that is, of the beſt Spirit of Wine) as may riſe in height above it two fingers breadth. Set this glaſs in *Balneo*, and digeſt the whole for twenty four hours: For in that time the Spirit of Wine diſſolveth that Salt, which proceeded from both the contrary Fires, together with the Microcoſmick Salt, Sulphur and Mercury; and from that Gold, now the ſecond time inverted, extracts the Tincture, which it hath, and is thereby tinged red as Blood. This Tincture pour off, and re-pour on other Spirit of Wine, and let that alſo ſtand twenty four hours in *Balneo* for extracting what remains: but this will have but little Tincture, becauſe the firſt extraction drew forth almoſt all. Add both extractions together, and in *Balneo*, with very gentle heat, by Alembick abſtract the Spirit of Wine from the Tincture; then will remain in the bottom of the Veſſel a very red and pleaſant Salt; upon which muſt be poured ſo much Aromatick Spirit of Wine, as will ſuffice to diſſolve all the Salt. Which Solution pour out from the Glaſs it was diſſolved in, into a ſtrong and very clean Glaſs-bottle, and keep it by you as a moſt pretious Treaſure.

The Doſe of it is very ſmall: for if you give, at one time, 1, 2, 3, 4, 5, or 6 drops, it will provoke Urine, expel Sweat, and the Stone alſo powerfully. But if the doſe be augmented, it purgeth the Belly, and that without any moleſtation. In a word, this Univerſal Medicine may ſafely be uſed in all Diſeaſes. Yet becauſe I intend brevity, I forbear to write more touching this Medicine.

The Excrements or Fæces, from which this Tincture is extracted, are not to be caſt away, but muſt be calcined with Fire till they are red hot, and (after a ſtrong *Aqua Regia* hath been poured upon them) the remaining Gold, which was not before extracted, muſt be diſſolved. Yet you ſhall have very little of that; becauſe the Man's Stomach did a ſecond time invert that Gold, (which was once before inverted) and made it reducible, ſo as it could be extracted with Spirit of Wine by help of the Mineral and Animal Mercury. It is hard for me to believe, that a more excellent Diuretick and Diaphoretick Medicine can be found, than this Microcoſmick Salt, which is tinged with *Sol.* For you will know of how great vertue this Diuretick and Diaphoretick Salt is, when you ſhall precipitate the acid Oil of Sulphur (or in defect of that, rectified Oil of Vitriol) with good Spirit of Urine, and reduce it into Salt. And will not ſuch a Salt as this be far more excellent, when Sulphur the (Philoſophically calcined) Salt and Mercury of the humane Body, together with the Tincture of Gold have Acceſs?

I have not writ any thing here of this Univerſal Medicine, to the end it ſhould be preferred before others, becauſe I very well know, we can of other Subjects prepare famous Medicines, and eaſily be without humane Dung; but whatſoever I delivered here, I did it for the good of all. For my part, I ſay, if any one hath no mind to proceed in this Operation, let him forbear. It ſufficeth me, that I have ſignified to the World, how by the help of Art, all venomous and ſtinking Subjects may be amended and cleanſed.

Thus may the induſtrious Phyſician, by the benefit of the three Principal Fires prepare many excellent Medicines, and before all ſluggiſh and careleſs Phyſicians be had in great honour by the Sick, and obtain the favour of GOD and Men. For he may invert the Venom of Vipers, Serpents and Scorpions, and convert the ſame into an Antidote powerfull againſt the Peſtilence, and other Venoms. He alſo underſtands how to prepare a Medicament of Toads ſafe to be given to dropſical Perſons: of Spiders a Medicine healing the Leprous; of Cantharides and May-Woms, a certain Salt good againſt the Stone of the Reins and Bladder; of Earth-Worms, or Rain-Worms, a venereal Experiment; of Opium, Tobacco and Henbane, a famous Somniferous Medicine; of Wormwood a Stomachal and Antifebrile; of Hellebore, Agarick, Spurge, Aſarabacca, Squill, and the like, an Univerſal Purging Salt; of Pearch-Stones, and Crabs-Eyes, a Nephritick Medicine againſt the Stone of the Reins and Bladder; and of Napellus, Staveſacre, and Wake Robbin, a famous Antipodagrick. Theſe, and other ſuch moſt excellent and preſently medicinal Salts may after the ſame manner be prepared: Theſe, for the health of infirm Mankind I could not content my ſelf to conceal. Indeed I could have writ more at large touching this matter; but brevity, which I now ſtudy, forbids a more ample Declaration.

CHAP. X.

Of the Nature and Property of that Fire, which lies hid in Tartar, or the Stony Fæces of Wine.

TArtar is a Salt, which in Fermentation ſeparating it ſelf from the Wine, adheres partly to the ſides of Wine-Cask, and partly reſides with the Dregs in the Bottom. This Salt or Tartar, although it is numbred among Salts, yet it is of another diſpoſition than all other Salts; becauſe they may be diſſolved in cold Water, but this Tartar cannot be diſſolved, except in boiling Water onely. No Man hitherto was willing to open the Cauſe of this hard Tye. But I, ſeeing Death daily approaching nearer and nearer, was not willing to carry it with me to my long Home, therefore I choſe rather to leave it behind me for Mankinds ſake. And thus it is with Tartar. Tartar contains in it ſelfa peculiar Sulphur by which the Salt is ſo bound or fixed, as it cannot like other Salt be diſſolved in cold Water. For if the Sulphur be ſeparated from it, it is eaſily diſſolved in cold Water, like other Salts. Yet ſo ſoon as ſuch Sulphur is taken from it, the ſecret Fire which lay hid in it, is alſo taken away: and thenceforth it can no more ſerve inſtead of a ſecret Fire, by which Metals are ripened into Tinctures; but is rendred onely fit to perform its Office in medicine. Touching which, for brevity ſake we ſhall here make no mention.

The method of depriving Tartar of its tinging Sulphur, that it may be diſſolved in cold, is thus: By burning two Pound of Tartar, reduce it into a white Salt, upon which, if you pour Water to diſſolve it, it will become a *Lixivium*. Which *Lixivium* pour upon one Pound of Tartar, and boil them together

together in an Earthen glazed Pot: Then the *Lixivium* diſſolves the Tartar, and ſeparates the binding or fixing Sulphur from the Salt. Then pour on one part of common Tartar, boil them together yet once, filter the boiled Liquour through Paper; then in the bottom will remain the Sulphureous Fæces, and the Water of Tartar paſs through yellowiſh; upon which Water pour diſtilled Vinegar to mortifie the *Lixivium*. This being done, the Vinegar will alſo be coagulated with both Salts, and be changed into one Salt; which Salt in Medicine and Alchymy is of great uſe and benefit; touching which if I ſhould here write more I ſhould be too tedious: but (GOD willing) the manifold uſe of it ſhall be ſhewed in my Third Century. For here my purpoſe is not more at large to ſpeak of the matter. [*vide Helm.* Fol. 183. and *Baſilius* p. 240.]

That feculent Slime, which adheres to the ſides of the Filter you ſhould not caſt away, but endeavour to fix. For then you will find ſome admirable thing, and more than here I dare diſcover. Becauſe that is the genuine Coagulator of running Waters, which it hardens, and is joined in a ſingular familiarity with metals, and eſpecially with *Sol*; as I with admiration have experienced. For in a few hours it tinged *Sol* with whiteneſs, and turned it into brittle Glaſs; whereas otherwiſe *Sol* is an Enemy to every volatile Sulphur. I do not believe there is any other thing in Nature ſecond to this wonderfull Sulphur; which is endewed with a potency coagulating and hardning running Subjects. For nothing, except Sulphur onely, can be found, which coagulates and tingeth. *Mercury* and Salt tinge not: but Sulphur doth that. Conſider I pray, how great power common Sulphur hath over *Mercury*, ſince four Ounces of it can coagulate a Pound of running *Mercury* into hard and red Cinnabar. Alſo four Ounces of common Sulphur can coagulate two or three Pounds of Oil into a Liver-like Maſs: and one Pound of Oil reduce ten Pounds of *Lixivium* into hard Soap. Likewiſe one or two half Ounces of the volatile Vapour of Sulphur in ſubterranean Veins, can coagulate ſerene Water into hard Rocks and Stones, as alſo all ſorts of minerals and metals. So, that little Sulphur which is found in Tartar, can render much ſower Wine or Water hard as a Liver; as is known to thoſe that labour in Wine and Vinegar.

I once purpoſed and endeavoured to extract from Gold its Tincture by the benefit of Salts, among which Salts Tartar alſo was; whence my Gold came out white and altogether brittle as Glaſs. But I, being willing to prove whether my Gold was conſtantly white or no, cupellated that with *Saturn*; and then I found my God not to remain white, but to have received its priſtine yellow Colour. That whiteneſs proceeded from nothing elſe, than the tinging Sulphur of Tartar, and becauſe the Colour was not fixed, therefore in cupellating it vaniſhed away:

Note: Hence, when I had broken ſmall a little of this tinged white and brittle *Sol*, and caſt it upon a little vulgar *Mercury* made hot in a Crucible, it preſently had ingreſs, and coagulated the *Mercury* into an heavy white Body, which when I expoſed to a cineritious *Examen*, all the *Mercury* vaniſhed, and the *Sol* onely remained in its Colour. The Reaſon hereof was becauſe the aforeſaid Sulphur of Tartar was not fixed. Yet thence I obſerved, that it might be fixed with *Sol* into a conſtant Redneſs. If any one hath convenient time and place, he may more profoundly ſearch into this Work, becauſe in it lies a great *Arcanum*. But how otherwiſe from Gold its Tincture is to be extracted, ſhall afterward be taught. Enough of that at this time.

But there remains this one thing to be ſpoken, *viz.* that whoſoever knows how to conjoin the Sulphur of Tartar with the Sulphur of Metals, and to fix it with them, may certainly obtain the Tincture: As *Ripley* clearly intimated, when he ſaid, He ſaw a red Toad ſo long and ſo often drinking of the Juice of Grapes, as until his Bowels burſt. If you do more ſeriouſly think of this (and GOD judge you worthy of his Grace) you will experience wonderous things; if not, then conclude thou waſt not worthy of thoſe Secrets. So much may ſuffice for this time to be ſpoken touching the admirable Sulphur of Tartar. More elſewhere of it, if GOD will.

CHAP. XI.

Proceeding now to Metallick fixed Salts, Mercurial volatile and moſt ſubtil Spirits, let us ſee what they are able to effect in Medicine. And firſt let us ſpeak of Antimony, as the Radical Juice of all Metals.

RECIPE of the *Minera* of Antimony finely pulveriſed one Pound, of our ſecret *Sal Armoniack* ſix or eight half Ounces; which diligently mixed put into a coated Glaſs Retort, which ſet into a Diſtillatory Furnace, and apply a Receiver thereto, miniſtring Fire leiſurely according to Art, that the Glaſs be not broken. In diſtilling firſt of all aſcends a little ſowriſh Water, then (the Retort being hot) a thick Oil fat and yellow, in which is contained the moſt excellent *Mercury* of Antimony, which you may thence thus ſeparate.

Upon the yellow Oil diſtilled, pour common Water, which Water will draw to it ſelf the Salts, and precipitate the *Mercury*, like a yellow ponderous and ſhining *Calx*, which being edulcorated and dried, will be an Univerſal Purger. Its doſe is very ſmall. I uſe no more than a quarter of a Grain, which (ſaving your Reverence) gives me 3, 4, or 5 Stools: but to a robuſt man I give half a Grain, a whole Grain, and ſometimes two Grains. *Note:* If a larger doſe be given, this *Mercury* excites vomiting alſo, though very gently. If you would render it Diaphoretick, you muſt thence abſtract rectified Oil of Vitriol. Then this *Mercury* of Antimony, which before was liquable as Wax, becomes altogether fixed and unmeltable; and then you may give of it from 1, 2, 3, to 8, or 10 Grains, which indeed move not Seidges, but provoke Sweat without wearineſs to the Patient, and performs the Office of a bleſſed Medicine againſt all Diſeaſes, where Sweat is needfull. Reduce the *Caput Mortuum* taken out of the Retort to Powder (the finer the Powder is the better your Work will ſucceed) and having put it into a Phial pour Spirit of Wine upon it, mix them by a continued ſtirring and ſhaking of the Glaſs (for otherwiſe it turns it ſelf into an hard ſtony Maſs) and in *Balneo* digeſt it for a natural Day. Thence the Spirit of Wine will acquire a red Colour, which pour off, and repour on freſh Spirit, which alſo permit to extract as much as it can. Then with gentle heat of *Balneo*, abſtract the Spirit of Wine from the Tincture, which will reſide in the bottom like a red Salt. Which Salt is

ſo great a Treaſure in Medicine, as exceeds all eſtimation. For it paſſeth through the whole Body like Fire, and conſumes Diſeaſes, as Fire burns up Wood. For according as it finds any defect in the Body ſo it operates, expelling Sweat and Urine, purging out all malignant and noxious Humours of the whole Body, and highly purifying the Blood, ſo as I believe no more noble Tincture and Salt than this can be extracted out of Antimony. Its doſe indeed is very ſmall, but of great efficacy, inſomuch as uſing but half a Grain of it you will find a moſt evident Operation. Therefore, if a Maſter of a Family provide for himſelf but one Drachm of this Medicine, he may by the help of that for the ſpace of one whole year not onely preſerve himſelf and family from many Diſeaſes, but alſo defend himſelf and them from all other Affects every where prevailing. Therefore let GOD have the Praiſe of it.

CHAP. XII.

That this way alſo may be prepared from Auripigment and Arſenick a Mercurial Oil, and a fixed Tincture.

Recipe of Auripigment one Pound of our ſecret *Sal Armoniack* four Ounces, which reduced to Powder mix, and diſtil in a Retort by degrees a volatile yellow corroſive Oil. At laſt, in the neck of the Retort will aſcend a ſublimate Red as Blood, tranſparent and as beautifull as an Oriental Ruby; the external uſe of which is famouſly medicinal againſt Ulcers and gangrenous Affects. And the yellow Oil is a moſt preſent Remedy for mortifying all gangrenous Ulcers, and laying a ſolid Foundation for their Cure, if the part affected be onely anointed with a Feather dipt therein. If any one pour Water upon the aforeſaid Oil, that corroſive, which aſcended with the Auripigment, will be ſeparated and precipited into a yellow *Calx*, which edulcorated and dried, becomes ſo ſtrong and vomitive, as it cannot ſafely be given inwardly: but outwardly ſprinkled upon Wounds, it lays a good foundation for healing. But if from the aforeſaid yellow Powder, Oil of Vitriol be abſtracted, it then becomes ſo fixed, as it will bear the force of a moſt violent Fire, without any exhalation of fume; and then loſeth all its venome, and may be moſt ſafely uſed from 1, 2, 3, 4, to 6, or 8 Grains, againſt the Peſtilence, all Feavers, and ſuch Diſeaſes where Sweat is needfull. It is to be admired, that this Subject ſo very volatile and venomous, ſhould by one onely abſtraction of Oil of Vitriol, become ſo fixed and conſtant in Fire. Alſo it is no leſs admirable, that this Oil like any other Oil of Minerals, doth not aſcend in the form of a Liquor, but like and in the form of ſome fat Vegetable Oil, whereas in it is not any fatneſs at all, becauſe all proceeds from the Auripigment.

Moreover, it will be profitable alſo to teach, that the aforeſaid fixed Auripigment (whenſoever unto it, by the help of *Mercury* of *Luna*, ingreſs is procured) projected upon a Red-hot Plate of Copper, renders the ſame totally white and as tractable as Silver. Which things being known, although of little uſe, do notwithſtanding ſavour of a pleaſing Curioſity, by which you will find, that of red Copper, white Silver may be made Alſo, after the ſame manner of white and red Arſenick, ſuch a medicinal Oil and Tincture may be prepared for *Venus*. *Note:* Whoſoever is deſirous to labour herein, muſt ſtudiouſly avoid the venomous fume: For Arſenick cannot well be handled without peril.

I might here alſo ſay ſomething of the running *Mercuries* of Metals; but ſince they rather appertain to the Tranſmutation of Metals, than unto Medicine, I thought it beſt to paſs over the mentioning of theſe in this ſmall Treatiſe, and to publiſh them in the following Centuries.

CHAP. XIII.

Of the ſubtil and moſt penetrating Medicinal Spirits of Metals.

IN my little Book of Fires, and alſo in my fifth Part of the *Spagyrick Pharmacopœa*, I have indeed made ſome mention of volatile Spirits, but for brevity ſake concealed the method of preparing. When I conſidered, that ſuch Works were judged by many impoſſible, I thought it would be worth while here to inſert the Preparation of them; and that onely from one Metal, that every Man may ſee the Verity of all the other. For whoſoever is deſirous to operate in Metals, he may be able by this one Proceſs ſufficiently to learn ſo much Skill, as it will not be difficult for him to extract ſuch volatile Spirits from other Metals alſo.

The way of preparing the volatile Spirits of Metals.

Recipe of the Steel Wyars, which the Needlemakers cannot uſe, one Pound, which ſo heat in the Fire, as all ſquallidneſs and filth may be burned away. Afterward put them into a glaſs Body, and pour on them of the hereafter deſcribed diſſolving Water 4, or 5, Pound. Place the Veſſel in *Balneo* or in Sand, and adminiſter Fire ſo to it, as the Water in the Glaſs ſurrounding the Steel may wax hot and not boil; then the Water preys upon the Iron to be diſſolved. For in this Operation the Steel is diſſolved, and fermented like new Beer or Wine. In this Fermentation a certain moſt ſubtil Spirit of *Mars* aſcends, without any corroſive, breathing a very ſtrong Odour, and endued with a Taſte vehemently penetrating. For ſuch a Spirit ſo penetrates the Tongue, as the taſte long remains, although a Man waſh his mouth, yet this taſte is not unpleaſant. By penetrating the Body of him that takes it down, it provokes Sweat copiouſly, opens obſtructions of the Liver, Spleen and Lungs, and comforts the vital Spirits and Stomach. Alſo it is admirably conducent to the Health of thoſe, who are accuſtomed to drink Wine mixt with Water; becauſe it gives the Wine a grateſull Taſte, and that far better, than the beſt of ſowriſh Springs are able to perform. If any one knows how to fortifie, or concentrate this Spirit by Rectification, he will be able to effect wonders by the benefit of it; which indeed yields not to be ſo readily concentrated, as Spirit of Wine: as you ſhall hear anon, yet it is poſſible.

The Water is prepared in this manner.

Recipe of common Salt one Pound, which diſſolve in 4, or 5 Pound of common Water, and pour upon it half a Pound of Oil of Vitriol, to which ſuperadd ſome Steel-wyar, and thence by diſtilling ſeparate the VVater; then no ſharp Spirits will aſcend with the VVater, but all the corroſive will remain

remain with the *Mars*, and nothing aſcend but a ſubtil Spirit void of Corroſion. This moveth admiration, that of ſuch an hard and fixed Metal, with the help of ſo gentle heat, ſhould aſcend ſuch a flying and penetrating Spirit. But it is more to be admired, that this white, volatile and penetrating Spirit, in a few hours ſpace, is able to turn it ſelf into a fixed red Tincture: yet you will find this incredible Miracle verified, thus.

Fill a glaſs Body above half full with our Spirit of *Mars*, yet take no more of it than 5 or 6 Pound, becauſe that would be more than is needfull for Probation. Place the Body, with its Head luted well in Sand, and diſtil off almoſt the VVater by Aſcent, ſo as onely half a Pound may be left remaining in the bottom. Take what aſcends out of the Receiver, and you will find it endewed with little more taſte than Rain-water; and that becauſe the volatile Spirit in this Abſtraction or Decoction is ſeparated from the VVater, and again converted into a fixed Body, *viz.* A moſt red Powder. VVhich red Powder is indeed a true Tincture, yet it hath no ingreſs into Metals, unleſs that be procured to it by the help of Gold. Hence is fulfilled the Precept of Philoſophers thus teaching: Make the fixed volatile, and render the volatile fixed. VVhat, I pray, is more fixed than Iron? VVhat more volatile than its Spirit? And laſtly, what more conſtant in Fire, than the Spirit again fixed into a red Tincture?

Note: VVhenſoever the Glaſs with the remaining Water, in which the red Powder is, ſhall by motion be diſturbed, the Water will ſeem to be blew, which blew colour ariſeth onely from the Tincture, which by that agitation is diſſipated into moſt ſmall Atoms. For when the Tincture red as Blood is again ſetled in the bottom, the Water ſtands above it white as before. Touching this flaming Sulphur *Coſmopolita* thus ſpeaks: *When Philoſophers have freed their Sulphur from his tenebrous Priſon, and ſee him ſwimming in his own Sea, they adore him, that is, are delighted with his Beauty.* But whoſoever would operate any thing to purpoſe, it will be expedient for him to provide in readineſs a good quantity of this Water, becauſe from ten pound of this Water, there is no more than one Scruple of our Sulphur to be expected. Which *Avicen*, in his advice to his Son obſerved, ſaying, he had need to procure to himſelf ſixty pounds of that Water before he began his Work. Touching which alſo *Braceſcus* hath excellently diſcourſed, although he was [ſeemingly] refuted by *Tauladanus*, who (by reaſon of the great ſubtilty of his Wit) could not conceive, that any good could lie hid in deſpicable groſs Iron. But that good Man *Tauladanus* no more underſtood the meaning of *Braceſcus* than he knew the nature of Iron. If any one be ſeiſed with the deſire of operating in this Subject, let him reade *Braceſcus*, by whom he will be ſufficiently informed. But many by his Writings have erred, through their miſtake of what he mentions in the latter end of his Book, *viz.* that he ſpake not of vulgar Iron, which by ſtrong Fire might be again reduced into Iron; but that ſuch Iron was to be choſen, as by the force of ſtrong Fire, could turn it ſelf into a green or blewiſh Glaſs. Where the ſimple Readers following the bare letter, ſought their Tincture in common Scales of Iron, but to no purpoſe. Here I ſpeak of a blew or green *Scoria*, which can no more be reduced into Iron. For whenſoever any one ſhall melt our fixed Sulphur mixt with *Borax*, although with moſt vehement Fire, yet he ſhall never reduce it into Iron, but into a greeniſh Glaſs. This *Crocus Martis* cannot do, nor any other deſtroyed Iron; but in Reduction it will always yield ſome ſmall Grains of Iron, wherefore thence no Tincture can be made. For whatſoever is endewed with a tinging Vertue muſt not be Metal, according to the Univerſal Conſent of all Philoſophers. If any one would find out ſome excellent thing, let him learn the Art of concentrating that, by which Concentration it will be multiplied in vertue.

Theſe few things I was willing at this time to communicate touching the volatile Spirit, and fixed Sulphur of *Mars*, for publick good. The whole work is neither difficult nor chargeable, becauſe we may uſe one and the ſame *Menſtruum* always again and again, nor is there need of new Expences, which are now eaſily acquirable. Theſe are things accurately to be noted, according as that moſt ingenious Poet *Virgil* hath perſpicuouſly hinted in theſe Verſes.

Conſider firſt, what here is to be done:
A Golden Branch, *with Leaves of Gold thereon,*
Upon a Tree concealed groweth: This
To the Infernal Juno *ſacred is.*
But the whole Grove, with diſmal ſhades of Night,
Obſcure and keep this Tree *from humane Sight;*
And till ſome one ſhall take down from the Tree
This Golden Branch, *there can no Entrance be*
Into Earths Caverns. Beauteous Proſerpine
Ordained hath that this rare Gift divine
Shall brought be unto her. No ſooner is
The firſt Branch *cropt, but in the place of this*
A ſecond ſprouts; and that moſt pure and fine,
As did the firſt, with golden Leaves will ſhine.
Therefore diſtinguiſh Right; when rightly known
This Branch *is unto thee, then with thy own*
Hands crop the ſame: for it will follow Thee,
If thou, by Fates, *for this Work choſen be;*
If otherwiſe, no humane Violence,
Nor ſtrength of Iron force it can from thence.

By theſe it evidently appears, that when one golden Bough is cropped off that Tree, another follows; and not onely one and another, but as often as you will crop one, another follows: Provided the Heavens favour our Enterprize; otherwiſe all endeavour will be vain. Yea, it will be impoſſible with hard Iron, or from hard Iron (as the Gold-bearing Tree) to acquire or crop one Branch. Conſider theſe things in your Mind. For here are words plain and clear enough to every man, whoſe Ears and Eyes GOD ſhall open.

CHAP. XIV.

Of the Preparation of the volatile and ſubtil Spirits of other Metals, and of their Uſe.

NOTE: This labour of preparing ſubtil Spirits of fixed Metals, and of reducing volatile Spirits, into fixed Bodies, ſo fully explains the Table of *Hermes*, as even Children may underſtand it. Alſo it proves the verity of that Aphoriſm unanimouſly uſed by all Philoſophers: The fixed make volatile, and the volatile fixed. He, whom GOD favours, will eaſily underſtand this; but to all others it will remain moſt firmly locked, although it be deſcribed to them with great clearneſs. I doubt not, but that this

Work

Work (when theſe my Writings in time to come ſhall fall into the hands of moſt diligent Searchers) will be more throughly ſought into, and a nearer way found, than this here deſcribed by me, by the benefit of which, the Sulphur of Philoſophers may be releaſed out of that dark Priſon, in which he is kept bound with moſt ſtrong Iron Chains. It would amaze a man to think, that from ſuch a tenebrous and ſhadowed black Tree, ſuch fair golden Branches ſhould be cropped. Although they (who are not Philoſophers, but would be accounted ſuch, whilſt they walk magnificently adorned with ſplendid cloathing) by reaſon of their blind Pride cannot ſee what I have here clearly written; yet thoſe Artificers, who wearing Linnen Frocks, labour in their ſimplicity, will ſee; becauſe to their Endeavours GOD gives his Benediction.

As I have here taught the way of extracting penetrating volatile Spirits from contemptible old Iron, and of reducing thoſe Spirits into fixed tinging Bodies; ſo alſo from other Metals the ſame may be prepared. Indeed one Metal is more apt for ſuch an Operation than another, and one gives forth its Spirits more readily than another: yet ſuch Spirits may be extracted from all Metals, but with the help of divers Solutions. For that Water which diſſolves Gold, leaves Silver undiſſolved, and what will diſſolve Silver, diſſolves not Gold. Common Salt, and Salt Niter, with the Water and Oil of Vitriol, (but rather of Sulphur) diſſolve *Sol*, *Mars*, *Venus* and *Jupiter*. Niter the Water and Oil of Sulphur diſſolve *Lune* and *Venus*. Moſt ſharp VVine Vinegar diſſolveth *Saturn*. The Spirit of Gold coagulates *Mercury* into *Sol*, the Spirit of Silver coagulates it into *Lune*. Both theſe Spirits are Medicinal. The Spirits of *Venus* and *Jupiter* are of a loathſome Taſte and Odour, and therefore unfit for Medicine. Spirit of *Saturn* is a mere penetrating Venome, or a VVater, which by its Odour ſuffocates the vital Spirit, wherefore every man ſhould ſtudiouſly avoid it, ſince its uſe cannot be without Peril; otherwiſe that Spirit in metallick VVorks excels all. Nor do I believe we can eaſily prepare a Tincture, whereby to coagulate *Mercury*, unleſs by the help of *Saturn* cold and killing all living things, yet it muſt be warily handled.

VVith theſe I cloſe up my diſcourſe of theſe Spirits; becauſe, although of them much more might be ſpoken, yet it will not be the part of a conſiderate man to caſt Pearls before Swine. Beſides, I judge I have already divulged more than is fit. But it is worthy of all obſervation, that GOD is a faithfull Defender and Governour of all moſt ſubtil Arts and Things.

CHAP. XV.

How by the Benefit of a Magnet from the Air may be extracted an Univerſal Medicine.

IT is ſufficiently known, that the Life of all things is reconded in the Air, without which Spirit, or Soul of the VVorld, nothing in this Univerſality of things can live or grow. But the Ancient Philoſophers ſought out various ways, by which that Spirit might be brought from a far off nigh unto us, be received and exhibited palpable, and at length they found the way, and by the benefit of it performed great things both in Medicine and in Alchymy, and that more or leſs, according as one knew better than another how to intercept and concentrate it. For the whole Art conſiſts in this Concentration. Therefore, ſince by the Grace of GOD, unto me alſo is ſomething known touching a like Concentration of the Univerſal Macrocoſmick Spirit of Life, I was not willing (like ſome envious or covetous man) to keep ſo great a Gift of GOD to my ſelf onely, and ſuffer the ſame to be buried with me; but choſe rather (for the health of mankind, for the profit of my Neighbour, and for the Honour and Glory of GOD) to impart ſomething thereabout; yet no more than is fit or convenient.

If any one deſireth to extract ſome good thing from the Air, he muſt firſt well underſtand what will be a good Magner, and how to make choice of an oportune place and time. For in a moiſt Seaſon, you ſhall extract nothing but an unprofitable Water from the Air. Wherefore no man ſhould undertake this labour of extracting, unleſs in the height or midſt of Summer, when the Air is very ſerene, void of Clouds, and hot with the Solar Rays. Becauſe, at ſuch a time, the Magnet, which you ſhall hang up in the Sun, immediately (from the hot Rays of the Sun) extracts a medicinal Water, which every one may uſe acccording to his Capacity. Alſo, I would have you to know, that various Magnets are found, by help of which Water may be extracted from the hot Air, but all ſuch Waters make not for our Univerſal Medicine. Yet I am willing here to ſubjoin ſome of thoſe vulgar Magnets.

The Firſt Magnet.

With 3, 4, or 6 Pound of *Mercury*, or more or leſs fill ſmall Stone Jugs, or ſtrong Glaſſes, which Glaſſes firmly cloſed let down into a deep cold Well, where the *Mercury* in it ſelf will concentrate the Cold. Now, if you would extract Water from the Air, hang up ſuch a cold Glaſs or Jug full of *Mercury* in the Air, where it will preſently draw Water to it ſelf. Therefore under the Glaſs or Jug muſt be ſet a Glaſs Tunnel with a long Pipe; by which the diſtilling Water may be received, and conveighed through the Pipe, from the hot Sun into a cold Cellar. If this be not done, the Sun will again draw to it ſelf the diſtilled Spirit. You may leave the Magnet hanging as long as it remains cold and Water diſtils from it: But aſſoon as no more water will diſtil, you muſt immerge it again in a Cold VVell, that it may recover its Coldneſs. In the mean while, inſtead of it hang up another; and repeat the labour ſo often as until you have gathered water enough.

Another Magnet.

Hang up in the hot Sun Jugs or Glaſſes full of ſuch water; which of their own accord will their contract ſo great Coldneſs, as you can ſcarcely endure to touch them with your hand. To them, as is aboveſaid, water will adhere, and diſtil into the Tunnels ſet under them.

A Cold water is thus prepared. In common water, or Spirit of Vitriol, diſſolve of *Sal. Armoniack* and Salt-peter equal parts, as much as can be diſſolved. VVith this water fill your Glaſſes, and with them, as is above ſhewed, extract water from the Air; and that will be equal in vertue to the former. If you be deſirous to extract ſomething more excellent from the Air, you muſt alſo expoſe to it more excellent Magnets. For as is the Magnet ſo it extracts.

CHAP.

CHAP. XVI.

Proceed in your Work thus.

PRepare 3 or 4 Pound of Oil of Sulphur *per* Campane, which rectifie, that it may become very fiery: Then provide a large Trough like a Cheſt or Box, which you may cover with linnen Cloath ſo, as through it no Duſt, but the Air onely may penetrate. In this Cheſt ſet your rectified Oil of Sulphur, poured into divers ſmall Pans or Diſhes ſo as they be not above half full. Leave theſe there three or four Days, or ſo long Day and Night expoſe them to the Air, as until the Oil of Sulphur hath drawn to it ſelf ſo much VVater as it ſelf was, and filled the Diſhes. This being done, empty out all the Diſhes into one Glaſs Body, and in *Balneo* with gentle heat abſtract thence all the humidity. The Oil remaining in the Bottome again expoſe to the Air in thoſe Diſhes, as before, ſo long as until they be filled. That water again abſtract thence, and proceed in extracting ſo long, as until you have got water enough. This water paſſeth through all Tinctures; but I have not as yet compleated this VVork.

Note: All the beſt of that, which this Magnet draws from the Air, remains with the Magnet it ſelf or Oil of Sulphur, as its true *Matrix*, in which it is nouriſhed and ripened; as the moſt Ancient *Hermes*, or the Father of all Philoſophers, in his Smaragdine Table, hath deſcribed in theſe words. Here the Soul of the VVorld ſpeaks. My Father is *Sol*; my Mother is *Luna*; the VVind or Air ſecretly bears me in its Belly: the Earth conceived and brought me forth, and is my Nurſe, *&c.* The Spirit of the VVorld can bring forth no Fruits, unleſs it be firſt ſeminated in a fit *Matrix*; becauſe nothing in the VVorld can be progenited without a VVomb. This our Magnet is of all Magnets moſt gratefull to the Soul of the VVorld, and a moſt natural Friend to the Spirit of the VVorld.

Much might be ſpoken touching this, but it is not neceſſary to thruſt pulſe ready chewed into a ſluggiſh Crows mouth, let him fly out and ſeek for himſelf. Here, in this Work are verified thoſe ſayings of Philoſophers: Nature rejoyceth in Nature, Nature overcomes Nature, Nature retains Nature. Here it is proper alſo to obſerve, what *Hermes*, at the end of his Table ſaith; *viz.* My power is not intire, or perfect, before I am turned into Earth. But how this is to be done, I leave to the conſideration of every Man. For the unworthineſs of the preſent wicked World forbids me to diſcourſe more amply thereof. To all men, whom GOD ſhall favour, theſe will be clear enough. Yet elſewhere touching this matter (if GOD will) ere long ſhall be taught.

CHAP. XVII.

How from Gold its Tincture may be extracted by help of a Magnet.

R *Ecipe* of moſt pure Gold an ounce and a half, and of the *Stellate Regulus* of Antimony made with Steel, one ounce, both which melt together in a covered Crucible; and whilſt in flux caſt at times a little Salt-peter, until the Niter ſhall have extracted all the *Regulus* of Antimony from the Gold, and turned it into *Scoria's*. Permit the whole to flow well for ſome time, that the Gold may well ſettle to the bottom from the *Scoria*, which will flow like water. Then pour all out into a Cone, where the Gold becomes a *Regulus*, which muſt be ſeparated from the *Scorias*. This *Regulus* of *Sol* comes forth much paler than it was before. If this pallid *Sol* be again melted with the aforeſaid Martial *Regulus*, and the *Regulus* thence abſtracted by the help of ſalt Niter, the Gold will come forth a little paler than it did the firſt time. If you repeat this Operation 8, 10, or 12 times, you will find your Gold at length almoſt totally white, and that its Tincture is extracted from it by the help of that *Regulus*. The Tincture of *Sol* is abſconded in the *Scorias*; this, by the benefit of a certain Antipathetick Salt, will be precipitated from the Fæces liquified, like a *Regulus* highly tinged.

Note: Yet in theſe Caſes, the Precipitation muſt be warily handled, leſt you alſo precipitate the *Regulus* [of Antimony] together with it, and ſo vitiate the Tincture. For this Extraction no vulgar *Regulus* is conducent, but ſuch onely, as is made of good Steel, and hath ſuch a property, as when a Flint is ſtrook upon it, it yields fiery Sparks, no otherwiſe, than as from hardned Steel. VVhich vertue, if it hath not, it cannot rightly draw to it ſelf the Tincture of Gold, but all endeavour will be in vain. This Extraction, *Coſmopolita*, in his new Chymical Light, hath very well deſcribed and diſcovered in theſe words. Such *Chalibs* muſt be taken, as is endewed with power of extracting that from the Rays of the Sun, which many have ſought, but few found. But further he ſaith: There is found yet another *Chalibs*, which from Gold extracts its Seed (if it be united or copulate with it 12 times) and thence is impregnated; but the Gold is infirmed even to death. But the *Chalybs* or Magnet brings forth a Son, which will be more excellent than his Father, *viz.* Gold, whence he proceeded, whoſoever knows this Magnet (of which *Coſmopolita* makes mention, and an hint of the preparation whereof I have here ſhewed) and underſtands how to uſe the ſame, in two or three Days he will behold and find ſo great things, as with the joy thereof his heart will be ſatisfied. For, if any one hath Philoſophick Eyes, he will ſee what is moſt pleaſing, if not, he will be no more delighted than a Swine, who among the Sweepings of Vineyards hath ſwallowed an ineſtmable Pearl or Jewel, but knows not the difference between a Pearl and that Dung.

CHAP. XVIII.

How from Gold its Tincture may be extracted by another Method, or by the benefit of a certain other Chalybs.

FIrſt, prepare the Green Lyon of Ancient Philoſophers (by help of my mineral Salt) of ſulphureous Subjects. To this Green Lyon caſt *Sol*, that is, pure Gold; which he, through his greedy deſire of devouring always, will ſwallow, and thereby acquire to himſelf notable Strength, Power and Beauty. For his whole Body will be thence renewed. His head, with the fore part of his Body will ſhine with a Graviſh Hair, very like a Crows Head; but his Tail with the hinder part of his Body will acquire many various and beautifull Colours, reſembling the genuine form

of the Rain-Bow, or the Tail of a Peacock. And as ſoon as the Green Lion hath ſufficiently concocted and digeſted the yellow Lion or *Sol* in his Stomach, he by Seidge expells the Reſidue, which will be void of Colour or Bloud. Then the Lion, proud and adorned with various and beautifull Colours, walks to the Waters, in which he immergeth himſelf, and waſheth away all his Colours, and becomes totally white like a Swan, which white Swan the Cook roaſteth at the Fire: where that white Swan firſt waxeth yellow, then more and more Red, untill he is able at length to bear the Fire, and, like a Salamander, live in it without any peril or hurt. This Red Salamander is one of the moſt noble Medicaments that can be prepared by Art. This Operation I performed but once; and then unto me appeared all thoſe Colours one after another, untill I obtained a Red Salamander, which is a moſt preſent Remedy againſt all Diſeaſes. But what it is able to effect in Chymiſtry, as yet I have not known, being onely content with a Medicine for Health.

CHAP. XIX.

Yet another way of extracting the Tincture from Gold.

R *Ecipe* of our dried Red Bloud of *Sol*, in the form of Powder irreducible one ounce, or an ounce an half of our Sulphureous fixed *Sal mirabile*, five, ſix or ſeven ounces. Both which mixt together, put into a ſtrong Crucible; which covered, ſet into a Wind-Furnace, giving Fire ſo, as they may flow together like Water for the ſpace of half an hour: afterward pour them out into ſome Iron Veſſel, or Cone, when the *Sal-mirabile* hath drawn from the Tincture of Gold a Bloudy Colour. The Mixture cooled, ſeparate the Red *Scorias* from the *Regulus*, which will be white as *Lune*. Pulveriſe the Red *Scoria*, or tinged *Sal-mirabile*, upon which pour common Water; this Water diſſolves the *Sal-mirabile*, not indeed tinged with a Red, but greeniſh Colour. Filter the Solution, and evaporate the unprofitable Water in a Glaſs-diſh. Then in the bottom will remain a Red Salt, which fortified with the Seal of *Hermes* or Luting of *Sapience*, keep for a ſufficient time in a continual Fire of Coals: for then the Sulphur, as yet immature, will fix it ſelf with the *Sol*, and become conſtant in Fire. From that Lute of *Sapience*, you may afterward (by the help of a proper Magnet) abſtract a fixed Tincture, and convert the ſame to Medicinal uſe.

Note: That green Saline Water, in which the Redneſs is latent, coagulates *Mercury* into *Sol*, not indeed for wealthy profit, but onely by the benefit of that to know the poſſibility of ſuch a Work. The Red ſlime, whence the Salt is extracted by the benefit of common Water, muſt be taken out of the Filter, mixed with new *Sal-mirabile*, and in a ſtrong Crucible be made to flow well for half an hour. Then alſo more Tincture will be extracted, and a white *Regulus* of *Sol* again ſettle to the bottom. If this labour be a third time repeated, the Tincture will be good, and a white *Regulus* will again ſettle, yet not ſo much, as was the firſt and ſecond time.

CHAP. XX.

How by the benefit of a certain Metallick Salt, from Venus *her Son* Cupid, *or rather the true* Mercury *of Philoſophers, may be prepared in the ſpace of One Day, ſo, as to ſuſtain the Trial of a Cupel: and indeed, it is neither* Sol *nor* Lune, *but a Tincture moſt ample for certain white Subjects.*

AS for the Method of Proceeding, I have willingly offered to the Sons of Art occaſion of underſtanding That: but the thing it ſelf is of ſo eaſie Operation, as even the Forgers of infamous Libels, and all the Brethren of Ignorance, would underſtand and perform the ſame, if any One in deſcribing it ſhould give them but a very little Light. It would be an unadviſed thing to caſt ſo noble a Pearl before Swine. Wherefore I muſt forbear to write fundamentally of it. Nevertheleſs, that the World may know ſuch a Tincture is in the Nature of things, and may be prepared of Things of ſmall value; I confeſs I thought it worth while to diſcover ſomething thereof.

Recipe of irreducible fixed *Arſenick*, and of *Mercury* of *Luna*, of each eight ounces. Both which Species being diligently mixed, you will have a famous Cementing Powder, by help of which you may perfect this *Arcanum*, thus:

Recipe of Plates of *Venus* beat thin and cut ſmall four ounces, which, with the Cementing Powder above mentioned, (making Lay upon Lay, as the manner is) into a Cementing Box glazed within, the Cover of which you muſt lute very well, and place that in a Cementatory Furnace; or (if you have not ſuch a Furnace) upon a Chimney-Hearth, putting ſo many Coals round about, as the Box may be covered well. Kindle the Fire above, and heat the Box leiſurely, and keep it there red-hot among the Coals ten or twelve hours. Then let your Fire go out, and the Box cool: out of which, if you take your Cement, you will find, that the Volatile Spirits of *Luna*, taking the fixed *Arſenick* to themſelves, have introduced the ſame into the Copper Plates, and procured to it the whiteneſs of Silver. This Cement, together with the Copper Plates mixed with ſalt Alcali or burnt Tartar, melt in a ſtrong Crucible in a Wind-Furnace, and pour out the Mixture into a Cone. When cold, ſeparate the *Scorias* from the *Regulus*, which will be white as *Lune*. Cupellate this white *Venus* with *Saturn*; then that, which is not *Lune*, will enter with *Saturn* into the Cupel, but the fixed *Mercury* remain above upon the Cupel. Granulate that, and diſſolve it by the help of *Aquafortis*; then indeed the *Luna* will diſſolve, but the Philoſophick *Sol*, or rather *Mercury* of Philoſophers, will remain in the bottom undiſſolved, like an Aſh-coloured Calx. This edulcorated and reduced, paſſeth into an heavy Metallick Body; in Face, Colour, and Hardneſs very like common and known Lead, which by *Spagyriſts* is called the *Black Lead of Philoſophers*. This Black Lead hath ſuſtained the Examen of the Cupel, yet it is neither *Sol* nor *Lune*. For if it had been *Lune*, the *Aquafortis* would have diſſolved it; and if it had been vulgar *Sol*, it would have been infected with no Lead colour. Nor can it be Copper or Arſenick; becauſe if it had been ſo, it could not have ſuſtained the Trial of the Cupel. Therefore, according to the Fables of Poets, it muſt be *Cupid*, or the Son of *Venus*. When the Gods ſaw that *Vulcan*, or the Son of *Jupiter* and *Juno*, was born ſo very black and deformed, they took care to have him carried into the Iſle of *Lemnos*, that there being waſhed by Apes (that is, by Men or Philoſophers imitating Nature) he might obtain a better Form,

Form, be nouriſhed and brought up to Man's eſtate. Who afterward married *Venus*, of whom he begat *Apollo*. Whoſoever deſires farther Information touching this matter, let him read that Ingenious Treatiſe of *John Braceſcus*, of the Tree of Life; where many great *Arcanums* are revealed, and the obſcure Writings of Poets and Ancient Philoſophers explained.

Here I have in few words divulged one of the greateſt of *Arcanums*. I have not my ſelf, as yet, by trial adhibited this *Mercury* of Philoſophers, for the Tranſmutation of Metals. Nevertheleſs, as I have written, it is a very far extended Tincture for white Bodies, and this I have ſeveral times experienced; yet onely in white Glaſs: where one part of the Tincture tingeth one thouſand parts with the redneſs of a Ruby, but the Glaſs keeps its own hardneſs. Now, if it could obtain the hardneſs of a Ruby, as well as its fair Colour, ſuch a Tincture would be full as good, as if it could tinge *Lune* it ſelf, or *Mercury* into *Sol*. For a good Ruby weighing but one ounce, is more eſteemed than ſixteen ounces or a pound of Gold. But this Glaſs, with how great Beauty ſoever it is tinged, ſtill remains Glaſs, and cannot otherwiſe be uſed than to adorn certain Pictures and Images.

Note: If any one knows how to extract the Tincture from this coloured Glaſs, they will obtain a moſt excellent Univerſal Medicine. For, although this *Mercury* of Philoſophers hath once paſſed the Trial of the Cupel, yet this happened onely by help of the Silver, which defended it from devouring *Saturn*; otherwiſe it had been conſumed by it. But now it is ſeparated by help of *Aquafortis* from the *Luna*, it is deſtitute of a Defender, and is conſtrained to enter again into its Mothers Womb, that it may there be ripened, and afterward new born. For all Sand or Flint, of which Glaſs is made, is the Matrix or Mother of all Metals. Glaſs is the Philoſophers Lute of *Sapience*, or Seal of *Hermes*, with which all Volatile Mineral Subjects are ſo bound and fixed, as they can abide fixed, ſuſtaining the force of Fire.

CHAP. XXI.

How, by the benefit of the Common Lute of Sapience, Sulphur, Antimony, Arſenick, Auripigment, *and the* Sulphur *of Vegetables, may in a ſhort time be fixed into fixed Medicaments.*

Recipe any one of thoſe Subjects, which you will; which if you diſſolve either by the dry or humid way, in a ſharp *Lixivium*, the *Lixivium* ſo far conſtringeth the Volatile Subject, as it will not, when heat red-hot continually evaporate. Such a *Lixivium* coagulate into Salt: If of this Salt you mix four or five parts, with one part of a liquable Flint or Sand, and put the Mixture into a Cementing Box well luted; ſet that into a Furnace of Cementation or Fixation to be fixed, the *Sal-Alcali* preys upon the Flint, and with it is converted into Glaſs. But the Volatile Mineral hides it ſelf in this Glaſs, and is not driven thence by the violence of Fire, but ſuffers it ſelf to be fixed into a fixed Tincture. After that, which was put in, ſhall be fixed, take your Box out of the Furnace or Fixation, and make the Glaſs flow well in a Wind-Furnace. This Glaſs, when poured out, will be Red in Colour. If you reduce this Glaſs to Powder, and by the help of Spirit of VVine extract the fixed Tincture, from this fixed Subject, you will have a moſt efficacious Medicine againſt all grievous Diſeaſes, eſpecially, if the Tincture hath been extracted from Antimony, or Common Mineral (not Vegetable) Sulphur. The Tinctures of Arſenick and Auripigment, are not ſo ſafe to be uſed in Medicine, but in Chymiſtry they are more profitable. For ſuch Subjects cannot be fixed by any more eaſie Method, than is here diſcovered by me. And *Paracelſus*, *Baſilius* and other Philoſophers judge, that a Tincture drawn from fixed Sulphur or Antimony, will be admirably efficacious in Medicine and Chymiſtry.

But that I ſo abruptly break off this diſcourſe, it is not without Reaſon, for I am confident I have writ plain enough to him whom GOD favours.

Note: If to your *Hermes Seal*, you add ſuch Sand or Flints, as *per ſe* abound with the firſt Ens of Gold, you will acquire the more noble Tinctures.

CHAP. XXII.

How to prepare a famous Univerſal Medicine of Gold.

Recipe three or four Ounces of the coagulated and irreducible Bloud of the Lion; of which the little Book of Dialogues treats. Diſſolve them, in the dry way, by the help of *Sal-mirabile*, into a Red Stone; from which reduced to Powder, extract its Tincture, by the help of Alcolizate Spirit of Wine. This Tincture is a famous *Aurum Potabile* againſt many Diſeaſes. Alſo it coagulates living *Mercury* into *Sol*. I purpoſed to have prepared no ſmall quantity of this *Aurum Potabile*, that I might therewith help and ſuccour the Diſtreſs of the Diſeaſed. But I was hindred for two years, ſo as I could not attend this Operation. Now I have found an eaſier Method of preparing it, and by help of that, do hope hereafter I ſhall do more than I could doe before. Touching its ſalutary uſe in Medicine, and its Coagulation of *Mercury*, ſhall (if GOD will) be treated of hereafter, before it be long. Here the Deſcription of that would be too tedious.

CHAP. XXIII.

How a Medicinal Water may be Diſtilled from Jupiter *and* Mercury, *by the benefit of Fulmination, or a ſudden Flaming Fire.*

MAke an *Amalgama* of Tin and Mercury in equal weights: Mix this *Amalgama* with Sulphur, Tartar and Nitre mixt in equal parts, and Grind them exactly upon a Stone, and then your Matter, with its Fulmen, is fit for Diſtillation. Therefore, when you purpoſe to diſtill a Medicinal Water from *Jupiter* and *Mercury*, begin your Operation thus.

Againſt ſome Wall, ſet up five or ſix Glaſs Cucurbits, [or Subliming-Pots of Earth glazed within] one above another, ſo as they may exactly ſhut in one into another, and let the Junctures be firmly cloſed with Paper and Starch, as I taught to be done in preparing Spirit of Salt. The loweſt Glaſs muſt have an Orifice in the ſide, into which the neck of the Diſtillatory Veſſel may be inſerted. Which Veſſel muſt be made in form of a Box or Cabinet round, a ſpan broad and high; in the upper part thereof, which is to be filled with Sand, the Cover may be included

in

in ſuch wiſe, as I taught in the Second Part of my Philoſophical Furnaces; yet below it muſt not be round, but plain; ſo as ſtanding out from ſome Bench it may be fitted to the Receivers. VVhen all Junctures of the Receivers ſhall be cloſed exactly, your Furnace is compleat. Then, at one time put in no more of the Mixture into a Crucible ſet in that Furnace, than one Ounce. From this (when you have kindled it with a live Coal, and nimbly put on the Cover again) will be excited a Fulmination, and flame ſuddenly penetrating, and with great noiſe ſeparating the Mercury from the Tin; in which ſeparation, part of the *Jupiter* and *Mercury* aſcends in the form of a ſoweriſh Water, but another part in the Species of a ſubtile yellow Powder. When this Fulmination ceaſeth to fume, take out that Crucible, and put another in his place: ſet fire of the Mixture in that, and let it burn as before; and continue the ſame labour, taking out and putting in, as long as any of the Mixture is left. Then take the Water diſtilled, together with the Flores, out of the Recipients. That Water (when digeſted with gentle heat for a ſufficient time) is coagulated into a Medicinal Red Salt. The Flores muſt be dried and fixed with freſh fulminating Matter, and as before ſublimed. Then again will aſcend Water and Flores. All the other Flores remain fixed in the Crucibles, which (reduced by force of Fire and diligent Fuſion) produce an hard Tin, which may be cupellated by the help of *Saturn*, but vulgar Tin cannot bear this Examen. This leaves ſomewhat behind it in the Crucible; yet not ſo much Gold as covetous Men deſire; but ſo much as renders the Medicinal Red Salt acquirable without charge.

Ancient Poets, fabulizing touching this Work, have writ, that *Jupiter* and *Mercury* ſought entertainment of *Philemon* and his VVife *Baucis*, as Perſons contented with little, that from them they might receive Meat and Drink liberally. Let him, who deſires a more ample Information of theſe things, peruſe ſuch Philoſophers, that he may ſee how highly this Work was eſteemed by them. For, as we now ſaid, *Jupiter* and *Mercury* turn not into rich and proud Men, (who regard not Art, but thirſt after heaps of Gold, by which they may long continue their Pride of life) but to the Lovers of Frugality onely, and into their Houſe bring their own Bleſſing with them.

CHAP. XXIV.

The way of extracting an Univerſal Medicine from common and well-known Lead.

BY Calcining reduce four pound of Common Lead to Aſhes. With which four pound of Calx of Lead, mix four pound of thoſe Stones or Sand, in which is contained the firſt Ens of Gold. Melt this Mixture in a ſtrong Crucible into Glaſs: which reduced to Powder, mix with a fourth part of Salt of Tartar, and in an Iron Crucible reduce it, ſo you will recover almoſt all your Lead. This Lead again reduce to Aſhes, and mix with it a fourth part of choice Sand and Flints, and melt the Mixture into Glaſs. VVhich again reduce by help of Salt of Tartar and Iron: again Calcine it, with Flints turn it into Glaſs, and reduce it as before; the oftner the better. For in every Operation the Lead extracts ſomething of the firſt Ens of Gold from the Sand or Flints, and at length becomes very rich with it. That afterward muſt, by the help of a certain Magnet, be extracted from the Lead, and converted to Medicinal uſe; as every Man, according to his capacity, is beſt able to uſe the ſame. I judge it not convenient to make a farther diſcovery touching this matter. Indeed the external face of this Proceſs is ſimple; becauſe in ſo ſhort a time, with ſo little charge, and from ſo vile ſubjects, an Univerſal Medicine may be extracted. Although *Saturn* is covered with a deformed Aſh-coloured Coat; yet within in his interior penetrals is reconded a golden Crown, which is not perceived before that grey Habit is taken off from him. As oft as any one hopes for, or thinks to obtain ſuch a thing, let him read what *Baſilius*, *Paracelſus*, and other Philoſophers have writ touching Lead. Bleſſed is that Man, who knows how to adhibit to this Operation the Secret Lead of Philoſophers inſtead of Common Lead: for then undoubtedly he will find a moſt excellent Medicine; according as Ancient Philoſophers, by the following Words have expreſſed:

Arctus eſt Hominis, qui conſtat VI. Elementis,
Cui P. ſi addideris, S. in M. mutare benè ſcis,
Hoc erit Æs noſtrum, conſtans Lapis Philoſophorum.

That *Arctus* is *LUMBUS*, before which word, if you ſet the Letter P, and change the laſt Letter S, into M, it will be *PLUMBUM*. Therefore if by the help of Common Lead, (which notwithſtanding is very impure, and as it were Leprous) the poſſibility of Tranſmutation may be demonſtrated and verified, as is manifeſt by my New Chymical Light, what may not the Secret Lead of Philoſophers effect, which is *per ſe* pure, and more excellent than Gold? *Coſmopolita* ſpeaks thus: Although unto him, to whom GOD hath ſhewed the poſſibility of that, the Gain be not ſo great as the Loſs, yet unto him is opened an Entrance to the knowledge and finding of all other high things. More of theſe at this time I forbear to ſpeak. Whoſoever is ſo groſs and ſtupid, as he knows not how to enter through this Gate ſet wide open, how ſhall he be able to enter through a narrower paſſage? Him, to whom this clear Light cannot ſhew the way, neither the Light of *Sun* or *Moon* will profit any thing. Yet I doubt not, but that even Mechanick Artificers, ſo ſoon as that my Light begins to ſhine, will ſearch out the Truth, unto every of whom I wiſh the help of GOD.

CHAP. XXV.

How Gold may be rendred Volatile, ſo as to be ſublimed into a ſalutary Medicine.

DIſſolve as much Common Salt in *Aq. Fortis* as you can, in this *Aq. Regia* diſſolve *Sol*, which precipitate with Spirit of Urine. In Sand abſtract all the Phlegm to a dry Salt; if afterward you augment the Fire, the Coagulated Spirit of Urine will carry up with it ſelf part of the pureſt *Sol* in the form of a Red Salt. This Salt will yield very profitable Fruit in Medicine. The Doſe is from three, ſix, eight, to twelve Grains; endued with power of expelling Sweat and Urine, and famouſly conducent againſt the Stone and Gout. Alſo ſince this Salt is void of any loathſome Taſte, it may ſecurely and commodiouſly be adminiſtred as a Cathartick to Infants, and Women with Child.

CHAP.

CHAP. XXVI.

The Way of preparing yet another famous Medicine Univerſal of Gold.

Diſſolve one part of Nitre, in four parts of Spirit of Salt, diligently rectified. In this Water diſſolve as much Gold as you will. Upon this Solution leiſurely at times, and drop after drop, pour on of Oil of Tartar ſo long, as untill both thoſe contrary Natures of the *Aq. Regia*, and Oil of Tartar, ſhall be united and quiet. Then, if you abſtract all the Phlegm, with the *Sol* will remain a Salt. This Salt, with the Gold, put into a little coated glaſs Body; yet firſt mix with them of burnt Bone as much in weight, as the Salt and *Sol* did weigh. The Bones are onely added, that the Gold may not be ſeparated from the Salt, or be precipitated into a Maſs and flow. Place the Glaſs, with this mixture, in Sand, augmenting the Fire gradually, untill the Glaſs in the Sand be obſcurely Red; in which degree of Fire, if you detain it the ſpace of ſix hours, the fuſible Salt will penetrate the hard Gold, and from it extract its beſt ſtrength, and thence wax Red. Which, when all is cold, take out of the Glaſs, and by the help of Spirit of Wine extract from that Red Salt all its Tincture; which you may adminiſter in grievous Diſeaſes, according as your Judgment ſhall inform. If you reduce the extracted Gold by the help of Borax, you will find your Gold pale.

The Way of Extracting a yellow Tincture from white Nitre.

By Retort diſtill a ſtrong Spirit from pure ſalt Nitre, mixt with burned Earth. Which Spirit, leſt it ſhould not be ſtrong enough, dephlegmate. This Spirit in Diſtillation aſcends Red, but when cold appeareth White; yet in it is abſconded a Redneſs, which will be revealed the following way. We ſee that if any thing fall from thoſe, who labour about *Aqua Fortis*, into it (whether that fallen in be a piece of Skin, Hair, or any part of the Nails of the Fingers) the ſame is tinged thereby with a golden Colour. The reaſon of this Colouring is this: All ſuperfluities of Nature (as the Skin, Nails of the Hands and Feet, all Hairs and Hoofs of Animals, and Feathers of Birds; which being old, fall off, and new ſucceed in their place) are endued with power of cleanſing the Humane Body, whenſoever they are prepared for Medicinal uſe; and that by reaſon of the abundance of Volatile Salt contained in them, and other ſuch like Entities. For Volatile Salt is of ſuch a Nature, as Salt of Urine, by which all corroſive Spirits are mortified and edulcorated. Hence it is, that when one drop of a Nitrous Spirit falls upon the Skin, or a Nail of the Finger, it is mortified and diſcovered by ſuch a Volatile Salt as lay hid in it; which otherwiſe happens not in all other Subjects, which are void of ſuch a Volatile Salt.

Now follows the Proceſs.

Recipe of the Hairs either of a ſound Man, or of any Animal, very well waſhed and cleanſed from all filth, four ounces. Upon theſe pour of moſt ſtrong and well rectified Spirit of Nitre, one pound, and the Spirit will totally diſſolve the Hairs. Upon that Solution pour by degrees ſo much Oil of Tartar, as untill all the Spirits of Nitre be mortified and totally deprived of their Corroſive power. But you ſhould not ceaſe to pour on Oil of Tartar, untill the Spirit hath well acquired a Golden Colour. This being ſeen, filter the Solution through brown Paper, in which the Fæces will remain, which notwithſtanding will ſcarcely weigh half a dram; becauſe the Spirit of Nitre hath almoſt diſſolved all. If from this Liquor in a Glaſs-body ſet in *Balneo*, you abſtract all the unprofitable Phlegm, in the bottom will remain a Red Salt; on which, if you pour good Spirit of Wine, ſome Fæces will again be left in the bottom, which you may caſt away as unprofitable. Moreover, if one half of that Spirit of Wine be abſtracted from the Tincture, a yellow Oil is acquired; which if you rub upon good Silver, that will look as yellow as if it were good Gold. If you ſhall take of this Tincture, although it is ſo Volatile, from three, ſix, nine, to twelve drops, it ſtrongly expells Sweat and Urine, cures the Jaundies, yields relief in the Dropſie; in Feavers it provokes Sweat, and in the Peſtilence or other Diſeaſes, where Sweating is needfull. I attempted to fix this Tincture; but it was an Operation of no ſmall time; therefore I was weary of proceeding, and abſolving the Work begun. If any one be ſo patient as to fix this Tincture, he, after his Work is ended, will have whereof to rejoyce. Touching this Operation, Philoſophers feigned the venomous Dragon to be a watchfull Keeper of the Golden Fleece; and that the ſame could not be taken away before the Dragon was brought to ſleep by a Soporiferous Medicine, by which he ſhould be rendred inſenſible and fixed. But undoubtedly ſome opinionative Men will ſay, that this yellow Tincture is acquired from the Hairs, Wool, or Feathers, rather than from the Nitre. The Opinion of ſuch Men I thus refell. If any one diſſolve Hairs, Wool, or Feathers, by the help of Spirits of Salt, Sulphur or Vitriol, he will acquire a white Solution: and if he mortifies the Spirit of Salt or Vitriol with Oil of Tartar, yet ſhall no yellowneſs appear, but all remain white. And ſuch white Salt, which comes from the Spirits of Salt and Vitriol, hath alſo its uſe in Medicine. The reaſon of that is eſpecially, becauſe Hairs in themſelves contain a very Medicinal Salt, which cannot poſſibly any other way be obtained, than by diſſolving with the help of *Aqua Fortis*, or of their re-mortification and reduction into Salt by the benefit of *Alcali's*.

After this manner from many Animals, by the help of Spirit of Nitre, may be extracted yellow Tinctures or Salts, which are very efficacious in Medicine.

Such Caſt-skins of Serpents, as are commonly found in Fields, and among heaps of Stones, are famouſly Medicinal againſt Poyſons, the Peſtilence, and all other venomous Diſeaſes.

The Teeth of Serpents, and Teeth of Mad Dogs and Wolves, have a Medicinal Efficacy againſt all venomous Bitings of Animals. Alſo they help the Stomach againſt all Feavers.

Scorpions, *May-Worms*, *Cantharides*, and ſuch like venomous Inſects, do all miniſter yellow Tinctures, or ſuch Salts as may moſt profitably be adminiſtred in all grievous and venomous Diſeaſes.

CHAP. XXVII.

What is to be judged of the Tincture of Corals.

WHen *Paracelſus* writ of the admirable Virtues of *Tincture of Corals*, which it manifeſts in the Expulſion of all grievous Diſeaſes, he ſaid, that very many famous Men endeavoured to perfect that Tincture; but an happy event or proſperous ſucceſs of the ſame happened to few. Even ſo hath it happned unto me, who have been a ſearcher of that Tincture above forty years. As to the external face, I could indeed variouſly extract a Tincture of Corals, but in Medicine it proved not as it ſeemed. Hence I conjectured that was not the true Tincture of Corals, but that Tincture came from the *Menſtruum*. Yet at length GOD ſhewed me ſome particular Feathers of Birds, which might be adapted to fixed Tinctures latent in Stones and ſtony Subjects, and by help of them the ſame be extracted from their groſs Bodies, and expoſed to publick view; yet among them all, three ſorts of Feathers onely hold the Principal place.

I.

The black Feathers of Crows,

which are endued with power to elevate ſuch Tinctures as love to aſcend.

II.

The white Feathers of Pidgeons,

which, in a ſort, contain in themſelves the pureſt, and before (by their natural virtue) lightly volatile Tinctures, invade and carry them upwards with them.

III.

Eagles Feathers,

which rowſe even the moſt fixed and heavieſt Bodies, and thence extract the inmoſt or nobleſt part of them, and carry it upwards with themſelves.

Yet theſe Eagle-Feathers are moſt commodiouſly uſed for extracting of fixed Tinctures from fixed Metals and Stones. For if they be applied to other very Volatile Subjects, they will carry up with themſelves the whole mortified Body together with the Tincture. Therefore, whoſoever would by the benefit of the Salt of theſe Feathers, or of the Salts of other Volatiles, perform ſome excellent Work, let him exactly learn the difference between one and the other. But ſince here I onely intend the Extraction of the Tincture from Red Corals, there is no need of any other Feathers for that purpoſe, but of Pidgeons Feathers onely, becauſe they will be ſufficient for this Operation.

The Feathers or Wings are thus found and acquired.

Diſſolve one pound of pure Silver in *Aqua Fortis*. If to this Solution you pour good Spirit of Salt, in which Common Salt is diſſolved, all the *Luna* will be precipitated from the *Aq. Fortis* in the form of a white Calx In which Precipitation the Silver acquires the aforeſaid white Pidgeons Feathers from the Salt-water, and ſubmergeth them, together with it ſelf, in the bottom of the Veſſel. In this Precipitation alſo the *Aqua Fortis* periſheth not, but paſſeth into good *Aqua Regia*. This white Calx of *Lune*, which I have owiſe called *Mercury* of *Lune*, if it be diligently edulcorated and dried; then are the Feathers prepared, by help of which I here teach how the Tincture of Corals is to be extracted.

Recipe one pound of Red Corals, grind them upon a Stone to a moſt ſubtile Powder; to which add as much of this white Silver Calx alſo pulverized. Put theſe together into a Glaſs-Retort, adminiſtring Fire by degrees, untill the Retort be red, whence (before it is red-hot) will aſcend a reddiſh Water pleaſantly ſweet; out of one pound of Corals, about four or five ounces Let this Water be dephlegmated in a ſmall Glaſs-body, by gentle heat of *Balneo*, and the unprofitable Water ſeparated from the Tincture; which every Man may ſafely uſe in Medicine according to his capacity and skill; becauſe by virtue of it the Bloud is egregiouſly purged. Almoſt after the ſame manner, by help of theſe Feathers, a moſt efficacious Water of Pearls may be diſtilled from fragments of Pearls, or in defect of them from Mother of Pearls.

Likewiſe, by their help, from a certain peculiar kind of white Talk, may be extracted a famous Coſmetick for whitening the black Skin.

Alſo otherwiſe by the help of theſe, from Vegetable and Animal, as well as from Mineral Subjects, many famous Medicaments may be extracted; all the Preparations of which, if any Man ſhould take upon him to deſcribe, he would above meaſure encreaſe the Volume of his Book: which is not my purpoſe now to do. Therefore with theſe already commemorated every well-meaning Man will hold himſelf content. Hereafter (if GOD pleaſe) we may diſcover more.

That which remains in the Retort take out, mix it with an equal weight of burned Tartar, and then by ſtrong fire melt the Mixture. Then the *Lune* will precipitate it ſelf into a *Regulus*, and the Corals, Pearls, or whatſoever you diſtilled by the help of that, will paſs into *Scorias*. If you rightly know how to operate this, you will loſe none of the Silver. But if you granulate the ſame, diſſolve it in *Aquafortis*, and again precipitate it with Spirit of Salt, edulcorate and dry the Calx, you will have new Feathers, by the benefit of which you may ſublime ſubtile Tinctures from Bodies. The reaſon why theſe Tinctures aſcend ſo ſweet, is, becauſe the ſharp Spirits of Salt, which the *Lune* detains with it ſelf, adhere to the Corals and Pearls, and mortifie themſelves with them, and upwards onely drive a ſweet Eſſence.

Since I have ſaid ſomething of White Pidgeons Feathers, and alſo made mention, that many other ſuch Feathers may be had, by which heavy Subjects may in like manner be elevated, and carried upward with them; among which the Dark-coloured Feathers of the Eagle do eaſily obtain the priority; I thought it would be worth while to ſhew the way of Acquiring them here alſo; which thus take.

CHAP. XXVIII.

How a Medicine may be prepared of Sol *and* Luna *together.*

RAcipe of Gold one ounce, and of Silver two ounces. Diſſolve the *Sol* in *Aqua Regia*, and the *Lune* in *Aqua Fortis*. If you mix both Solutions together, one Metal will precipitate the other, and both ſettle to the bottom in the form of a Dark or Aſh-coloured Calx. This Precipitate edulcorate and dry, and

and mix with the ſame half its own weight of our Eagles Feathers Diſtil theſe in a Glaſs Retort with ſtrong Fire: then will the Eagles Feathers take up with it ſelf a white Water; in which, notwithſtanding, is latent a red Tincture; but of an unpleaſing Taſte, and therefore not to be adminiſtred in medicinal Practice. Yet, if this fierce and horrible Water be mortified by the help of a *Lixivium* of Tartar, and afterward ſome white Glaſs broke ſmall be melted in a Crucible with ſome ſuch Salt, the Glaſs will be tinged by the Salt, with an eminent yellowneſs anſwerable to the Colour of Gold. That yellow Tincture may be extracted from the Glaſs, and uſed in Medicine; becauſe it ariſeth both from *Sol* and *Luna*, and therefore neceſſarily muſt be medicinal.

Note: That during the Diſtillation, the Glaſs veſſel contracts divers Colours, partly red, and partly yellow; *viz.* as long as it ſtands in the Fire and is hot; but the Neck remaining out in the Air, continues white. Here is cauſe indeed of admiration, that by that mixture of divers Colours many and various Figures are repreſented, as Mountains and Valleys, adorned with Rocks and Trees, ſo artificially, as they ſeem to be the Work of a Painter. Some ſuch Glaſſes painted, both by Art and Nature, I gave to ſome of my curious and ingenious Friends; who I believe have them yet to ſhow. Theſe Glaſſes are tinged well and throughly; ſometimes through their whole Body, and that ſo firmly, as even the ſtrongeſt *Aqua Fortis* or *Aqua Regia*, or any Corroſives cannot take off thoſe Colours. Which indeed is a moſt ſtrange and admirable thing, that even vulgar and corporeal fixed *Sol* and *Luna* ſhould be rendred ſo volatile, as to be able to enter into the compact Glaſs, and tinge the ſame. Spirits have great power, are void of ponderoſity, and when they tinge, the vertue of them is diſcerned far: even as the Spirits of men and other Animals are void of all heavineſs or weight; which we clearly diſcern by this, *viz.* that a man living, is much lighter than when he is dead.

Moreover, Spirits cannot onely render fixed *Luna* volatile, and reduce it into red Bodies as *Sol* and *Venus*, which without any hurt of their form, and without increaſe or diminution of their weight, they can totally tinge with whiteneſs; but alſo Spirits can render the moſt fixt and moſt compact Gold volatile, and induce it into compact *Lune*, whereby that ſhall be tinged with yellowneſs, which is a thing very wonderfull. But that Spirits can induce Tincture into Glaſs, without hurt or augmentation of its weight, deſerves greater admiration; eſpecially becauſe it is the common Opinion of putatitious Philoſophers, that in Glaſs are no pores, yet the contrary of their ſuppoſition is true. For if it were ſo, as they perſwade themſelves, which way I pray could Tinctures be introduced into them?

Note: That Spirits do not onely induce Metallick ſubtile Tinctures into compact Metals and Glaſſes; inſomuch, as by the help of white Spirits, yellow *Sol*, without deſtruction of its form or ſpecies may totally be tinged with whiteneſs; and white *Lune* by the mediation of red Spirits, be totally tinged with yellowneſs, and white Glaſs with various Colours reſembling the Beauty of Jems: but they alſo extract fixed Bodies from other fixed Metallick Bodies. As we ſee, as often as we caſt any mixture of *Sol*, *Luna* and *Venus*, (melted into a Maſs) into thoſe Spirits; the ſame Spirits extract the *Luna* and *Venus* from the *Sol*, without corruption or deſtruction of its form, ſo as the *Sol*, although this ſeparation is made, doth notwithſtanding remain compact and maſſy. We have ſuch Spirits as theſe in our Poſſeſſion, and can render the ſame fit for our purpoſe.

As for all other Spirits, which are various; *viz.* 1. Are Cœleſtial and Divine. 2 Terreſtrial and Diabolick. 3. The Spirits of the four Elements; theſe excel the former in power: for they cannot onely paſs through Doors that are ſhut, but alſo through the hardeſt Stones and Rocks, and there at pleaſure ſport and perpetrate wonderous things. As you may learn from thoſe that labour in Mines of Metals, where ſuch Spirits inhabit, and ſtoutly defend their Treaſures of Gold and Silver, from ſuch as come to ſpoil them of the ſame; wherefore they invade the Miners, ſtrike them, pault them with Stones or Dirt, blaſt them with venomous Vapours, and oftentimes kill many of them at once. What wonderfull things they in theſe ſubterranean Manſions are able to effect, is more than ſufficiently known. In the Mansfieldick Mountains of *Venus* or Copper, the Spirits paint all kind of Figures, eſpecially of Fiſhes; ſome of which I my ſelf have ſeen. About 100 years ſince there was dug up a certain Image of *Venus* upon a black Fiſſile Stone, wherein *Luther* and the Electour of *Saxony* were ſo evidently expreſſed, as either of them might be ſeen kneeling before the Image of Chriſt crucified. Alſo another ſuch Fiſſile Stone was thence dug up, in which was exactly figured *John Baptiſt* baptizing Chriſt in *Jordan*. But if our Spirits of Salt can induce Tinctures into the compact Bodies of Metals; and Elementary Spirits in their ſubterranean Habitations, can impreſs many and various Figures on Stones; what is that good Cœleſtial Spirits ſhall not be able to effect? Did not theſe preſerve the three Children in the *Babylonian* Fiery Furnace? Did not they bring *Peter* out of Priſon; and the Prophet *Habacuck* to *Daniel* into the Lyon's Den? Are not they able to bring in, and lead out? Cannot they render fixed palpable Bodies volatile, ſpiritual and inviſible, and on the contrary render inviſible Bodies viſible and tangible?

Many things might here be ſpoken touching the Nature, Property and Difference of Spirits, but that they are not pertinent to our preſent purpoſe. If GOD permit, according as I have purpoſed, I ſhall ere long ſet forth a peculiar Treatiſe of Spirits. Here we have heard how Spirits can bring through ſhut Doors hard Bodies, and there render them corporeal and viſible. Which may ſerve for Information to every Searcher into the Light of Nature.

CHAP. XXIX.

Yet one other Specimen *of Probation by the help of Eagles Feathers.*

THAT Artificer *Lazarus Ercker*, moſt famous for finding out the Veins of Metals, in his Book of Probations (or of finding out Veins) relates, that the *Venetians* hired certain men for wages, and ſent them into *Germany* to gather of the glaſſy dark coloured Grains of Sand of the Rivers running by the Mountains, and to tranſport it to *Venice*. The ſame is done at this very day. And although this Exportation is prohibited by Law, yet they deſiſt not, but clan-

clandeſtinely proceed. The common People of thoſe parts perſwade themſelves, that Grains of Gold are contained in thoſe Sands, and therefore by Edict every man is forbid, either to remove it thence, or to convert the ſame to his own uſe.

Indeed *Lazarus Ercker* added, that he had ſubjected ſuch Grains of Sand to various Trials, but never found Gold in them; yet that he alſo underſtood, that the *Venetian* Artificers prepared of that Sand ſuch beautifull Colours, as with them were in more eſteem, than Gold it ſelf. But I affirm, that *Erckerus* did not rigthly know thoſe Grains of Sand. For indeed there is little corporal Gold in them, but much ſpiritual Gold. If to thoſe Sands the Eagles Feathers be added, they will carry upwards with themſelves much ſpiritual Gold, which will be very conducent in Medicine. Such Grains are found in all the Sands of Rivers in all Regions of the World, and in the Gravel on the Shores of common Navigable Rivers: whence much good may be gained. Now theſe may ſuffice to be ſpoken touching the Eagles Feathers, for it is not convenient to divulge more.

CHAP. XXX.

Yet one Royal Medicine of Vulgar Gold.

MAke one Ounce of Gold more or leſs, irreducible by the benefit of Salts. Then to ſuch irreducible or unmeltable Gold, add as much by weight of the fixed Salt of the Eagles Feathers burnt. Put theſe into a firmly coated Glaſs, and place the Glaſs in an Earthen Pan full of Sand; which Pan ſet in the Fire that it may be red hot. But after it hath ſtood in ſuch a Degree of heat, for four or five hours, let it cool. Then take your fixed *Sol* out of the Glaſs, and it will be like white Chalk. This white *Sol* taken out of the Glaſs put into a good Crucible, upon which lute another, and then ſet it in a Wind Furnace, where having ſtood four or five hours, without any extream heat, let it cool. Then your Gold will be tranſmuted into a Tincture intenſly red. Grind this red Salt to a moſt ſubtil Powder, and pour on Spirit of Wine to extract his Tincture. The tinged Spirit pour off, and pour on other, that it may alſo extract. Abſtract the Spirit of Wine from the Tincture, and in the bottom a red Saline Liquor will remain, which is to be accounted a true *Aurum Potabile*: becauſe it is not poſſible by any way whatſoever to extract any Gold from thence. This Operation begun, I once abſolved without Errour; but many times afterward trying my Work, did not ſucceed ſo proſperouſly as at the firſt time. Yet I rather aſcribe the Errour to my ſelf, than to Art, plainly judging, that no other way more ſwift, more eaſie or more preparable, can be obtained a moſt readily profitable Tincture for diſeaſed, humane and metallick Bodies. Yet I add this. If thou ſuffereſt the common and now ductile *Sol* to be and remain Gold; and ſparing labour and charge for making it irreducible, do onely make choice of ſuch Stones for your Operation, ſuch as without Charges you may get, and by nature partake of irreducible Gold. Then indeed you may much more eaſily find what you intend. For whatſoever Tinctures of a golden Diſpoſition are incited in thoſe Stones, they notwithſtanding in this operation loſe it, altogether wax white, and at length totally red again. Which being beheld by me, I never ſaw in all my Life a more wonderfull Sight. Hence Philoſophers have always ſaid: Whoſoever can ſo deſtroy vulgar *Sol*, as it can never be again reduced into *Sol*, he hath attained to a very great Myſtery. Alſo they further ſay: Whoſoever knows not how to make our *Sol* (which is vulgar *Sol* rendred irreducible, or ſuch as hath not yet felt the force of Fire, and in Stones is by Nature irreducible) white, he alſo cannot make it red. But now that is done this way. Therefore you need not doubt that beſides medicinal Remedies, ſome other Eminent Works may thence be made. Which I leave more deeply to be ſearched into by thoſe, who are yet ſtrong and able to endure labour. As for my own part, I eſteem the Pleaſures and Riches of this World to be worſe than nothing; and ſeek onely Incorruptibles, which can neither be ſtolen by Thieves, nor gnawn by Moths and other Vermine, nor be deſtroyed by any force of the Elements.

An Admonition.

IN this little Book, candid Reader, I have treated of many rare *Arcanums*, or Secrets not vulgar; and that very briefly. All I here write, I write from certain Experience, as to Medicine: far be it, that I ſhould profeſs my ſelf a Maſter in the Melioration of Metals, I had rather ſay with *Socrates*, *This one thing I know*, viz *that I know nothing*. Indeed had I been a younger Man, I ſhould ſcarcely have forborn to exerciſe my ſelf in ſuch an Operation; but my great Age having rendred me unfit for all Labours, and unable to do any thing, I may eaſily be excuſed, for I am as it were compelled to abſtain from ſo great a Work.

Here in this Book I have treated of divers ſecret Fires, yet not of all to me known, but of many of them: touching the beſt of them all (if GOD permit) the ſeventh Part of my *Spagyrical Pharmacopœa* ſhall treat. The wonderfull Vertues of which ſecret Fires is ſo far beyond belief, as they exceed all the Fires in this Enchyridion commemorated.

Quantum Lenta ſolent inter Viburna Cupreſſi.

I am amazed, as often as I call to mind, how immenſly vertuous ſuch fiery truly Stygian Spirits are, which are endued with a faculty of mortifying all Metals (although they be Bodies of greateſt ſtrength) and of carrying with them their immortal Souls, whereſoever they can. For they are endued with ſo great power, as nothing is able to defend it ſelf from them. Yet beſides theſe there are alſo other horrid Spirits made by Art, which do not onely after Mortification take from metallick Bodies their Soul; but alſo are endued with ſo great power, as they take away the Body with the Soul. Spirits of this kind are not uſefull for our neceſſities, but thoſe Spirits which do onely mortifie the Body, and draw forth from it its Soul, leaving the groſs Body. If theſe Bodies were as conducible to us as Spirits, there would be no need to extract from them their moſt pure Spirits or Souls, to prepare our Medicine of them. Wherefore we, not without good reaſon, by the help of Artificial Diſtillation) extract the moſt clean Souls of Metals from their rude Bodies. For, by the benefit of Diſtillation, all Bodies of Vegetables, Animals and Minerals, are purified and ſubtilized. Which clean and ſubtil Spirits (when they are again reduced into fixed Bodies) muſt needs be better

Bodies

Bodies than all other vulgar Bodies, which never yet were Spirits. Therefore, the more fixed thoſe Bodies are rendred, and the more thoſe Spirits are ſubtilized, the more pure and further powerfull Tinctures will be obtained from them. The like we underſtand by Elementary Spirits. Theſe Spirits, by their proper Virtue, can ſo far extend themſelves, as to become wholly inviſible, and (if I may ſo ſpeak) altogether perviſible: on the contrary, they can again concentrate themſelves, and conſtringe themſelves into a very narrow compaſs, and in ſuch-wiſe aſſume viſible Bodies, palpable and hard, as they pleaſe themſelves. Although ſuch Objects, in the Judgment of the Eyes, are accounted Bodies, yet in very deed they are not true Bodies, but are onely concentrated Spirits, which enjoy a perpetual power of extending themſelves again into latitude, and of leaving their corporeal Form and Shape, and re-aſſuming their Spiritual Figure. But it is impoſſible that theſe extended Spirits ſhould poſſeſs ſo great power, as they had before Extenſion. For Spirits extended are no other than Air and Wind. On the contrary, concentrated Spirits have incredible Fortitude, penetrate more ſwiftly, and are Bodies of very great potency. A common Body cannot penetrate into another, without hurt to it ſelf; nor in that extend it ſelf, becauſe of its groſs and hard Maſs. Yet ſuch a Body, as is made of a certain Spirit, can penetrate other Bodies, and amend the ſame, without deſtruction of their Form and Species. As for Example: If any one turns a fixed Metal into a ſubtile Spirit, and this Spirit again reduceth into a fixed Body; this Body will not be a common, compact, groſs or mortified Body, like all other Metallick Bodies; but is a Body ſpiritual, living, penetrating and vivifying mortified Bodies; or is (as I may call it) a Corporeal Spirit, which can extend it ſelf in Amplitude, and ſhew its potency an hundred or a thouſand ways; according as all true Philoſophers aſcribe to their Univerſal Medicine or Tincture, that it, in a very ſmall quantity, is able to tinge or meliorate a great quantity of the more vile Bodies into Bodies moſt noble. Which admirable Correction is not as yet known to me; yet I certainly believe and judge, that ſuch a Tranſmutation, or famous Emendation of Metals may be made, by the benefit of concentrated and fixed noble Metallick Spirits. Whoſoever hath Time and Place convenient to ſet about this Work, may try what is poſſible to be performed by the help of Art. Convert fixed Bodies into ſubtile Spirits, and reduce volatile Spirits into fixed Bodies, then ſhall you obtain whatſoever you can deſire or wiſh for.

Indeed I have Reaſons enough to reſtrain my Quill from a farther promulgation of ſuch high Matters; yet ſince I have proceeded farther in this diſcovery, than any Man before me ever did; what hinders but that I may to the Horſe man, to whom I have given a *Niſæan* [or excellent] Horſe, give the Bridle alſo? Therefore it pleaſeth me to reveal yet one kind of Spirits, which very lovingly receive the Souls of Metals (after their Bodies are mortified) and carry them up into the Philoſophick Heaven, that is, into the *Alembick*. Which good Spirits are not horrible and cruel as the former, but ſweet and amicable. Indeed, ſuch good Spirits do not willingly aſſociate themſelves with the Souls of all Metals promiſcuouſly, but onely with ſuch moſt pure Souls, as are in *Sol* and *Luna*. But if they be compelled to be concerned in the Mortification of fœtid groſs Metals, as *Mars* and *Venus*, or of venomous, and as yet immature and volatile Metals, as *Jupiter*, *Saturn* and *Mercury*, and to receive the out-paſſing Souls of them; they refuſe not this office, yet from ſuch fœtid Souls they contract a ſtink to themſelves, and therefore can ſcarcely afterward be Medicinal. Wherefore, it is better not to uſe theſe good and pure Spirits, unleſs for receiving the Souls of clean Metals; for then they remain good, and cannot be adminiſtred in Medicine without admiration: and, on the contrary, the Souls of venomous Metals may be ſo much the more happily uſed for the Emendation of Metals.

Now, as touching theſe good Spirits, know, they are nothing elſe but a pure Spirit of Wine, when it is aſſociated with *Sol* and *Luna*, at that very time, wherein their fixed Bodies are invaded and mortified by their Enemies, and their pure Souls ſet at liberty; then they are received and carried upwards by theſe pure Spirits; and a Royal Medicine is obtained, which every Man may adminiſter according to his underſtanding. There are alſo many other Spirits which attend Metals deſtroyed and mortified, that they may take to themſelves their pure Souls and carry them away. But of theſe enough at this time. Ere long (GOD willing) I ſhall ſpeak more at large of theſe in the Seventh Part of my *Spagyrick Pharmacopœa*.

O moſt High GOD, *the One onely Beginning and End of all things, I making ſupplication from the bottom of my heart deſire, that (when that general Deſtroyer of Humane Bodies ſhall come and deſtroy my lean and dried Earthen Maſs, according to thy divine Will, and ſet my Soul at liberty from the Bonds of the Body) thou wilt be pleaſed in that very hour to take compaſſion on me, and ſend thy Miniſtring Spirits the* Holy Angels *(by reaſon of thy Grace and Fatherly Mercy) to me at the hour of Death, that receiving my departing Soul, may humbly proſtrate it at the feet of thy moſt Holy Majeſty.* Amen.

The End of the Sixth Part.

THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

In which is farther treated, how of Man's Urine may be prepared the Secret *Sal-Armoniack* of Philoſophers, and what incredible Works may be performed by the benefit of it, both in Medicine and in Alchymy: With an Inſtruction annexed how an Univerſal Medicine and true Tincture for Humane and Metallick Bodies may be acquired; and that no way more eaſie, more expeditious and leſs chargeable, than by the help of good Spirit of Wine, or inſtead of that a burning Spirit extracted from Corn, or other Vegetables.

The PREFACE to the READER.

Well-meaning Reader,

THE principal Reaſon which moveth me here in this ſmall Treatiſe (without any reſpect or regard of Perſons worthy or unworthy) ſo evidently to reveal and publiſh to the ungratefull World the Secret Sal-Armoniack *of Philoſophers, is this: namely, becauſe, by reaſon of my old Age, I have now one foot in the Grave, and am ready to depart this World, and do patiently expect a far more excellent Manſion prepared by God. I, who now diſcover this Secret* Sal-Armoniack, *do alſo here intimate thoſe vaſt benefits, which (by the help of that) may accrew to Mankind, accounting great Works of Mercy may be done by it; becauſe it is that, by the benefit of which, all things neceſſary for Life may be acquired by all Men, whether young or old, poor or rich, as in the following Praxis ſhall largely be demonſtrated.*

That Men (if they themſelves will) may gain much, yea as much as they pleaſe, by the benefit of this my free and ample Revelation of ſuch an ineſtimable Salt, *I am eaſily able to prove: eſpecially, ſo ſoon as I, in the following Praxis, ſhall exhibit a* Specimen *of thoſe Subjects, the abundance of which is in all parts of the World, every-where offered, no leſs to the Poor, than to the Rich, without any expence of Money, or other Charges; but it is known by very few, privily hated by that proud Step-Dame the World, trod under foot, and for its exterior vileneſs caſt out upon the Dunghill, and thrown away in the corners of Streets.*

But, ſome One may ask, how thoſe needy People can from Urine onely, acquire things neceſſary for Life, although they ſhould know, that in it is contained a Treaſure? To ſuch an One I thus anſwer: It may very well be effected, becauſe in this little Book I have explained, not onely that in it is an abſtruſe Treaſure, but alſo how it may eaſily be extracted. Inſomuch as I doubt not, but that ſome of the Lovers of the Poor will do their endeavour to extract that Treaſure from the ſame. Which being done, if the World (which will believe nothing but what it ſees) take notice of it, and finds the verity of our Aſſertion proved in Fact, then many more will uſe a like endeavour to get their living from ſuch a Subject, every-where to be had, and preparable for little or no charge. If ſuch Operators ſhall need more Urine, than they themſelves make, they muſt neceſſarily buy it of poor Families,

Families, abundance of which you will every-where find, readily deſiring to gather the ſame for their daily Bread, and to bring it to the Artiſt: that way one hand cheriſheth and helpeth another. For by this means every Re-publick might be brought to a flouriſhing ſtate, ſo as no Man (unleſs he will himſelf) needs to want Bread in what part of the World ſoever he lives. I indeed have not buried in the Earth my five Talents gratiouſly granted to me by God, but have put them into the publick Bank. What if the mad and blind World will neither ſee nor hear, it may for all me follow its own deſperate humour. It is ſufficient for me that I have divulged ſuch Myſteries for the ſafety and well-being of Mankind, as no other Philoſopher before me hath ever diſcovered the like. For ſince the Subject is ſo very vile, vulgar and obnoxious to vaſt contempt and hatred among proud Fools, many of them did involve its genuine Name in the ſecret Cabinet of Silence. But, that I may ſpeak my mind freely, I openly confeſs and aver, that in Urine is contained a Mercury, *by the help of which very much may be effected in Chymiſtry and in Medicine; and which is eſpecially very conducent to deduce Metals to their firſt Matter; and thence may be reaped a notable Fruit of Utility, as well univerſally as particularly. For whatſoever I have now writ, I compoſed the ſame in the extremity of my diſcompoſure and ſickneſs, that this admirable Secret might not be buried with me in the Earth, where even all the higheſt Arts of the moſt excellent Artiſts ſeem to putrefie together with them, not being by them (before their Death) communicated to Mankind remaining; that ſo I may ſay with the Vulgar (not rightly underſtanding)* All Habits of Underſtanding are not ſo much hoſpited in the mortal Body, as retained in the immortal Mind.

If all things here anſwer not the deſire of the diligent Searcher of Art, or be not clearly and plainly enough diſcovered, let him look into the following Treatiſe, which is intituled, A Treatiſe of the Mercury of Philoſophers, *where perhaps he will find ſo many deſirable things, as will compleatly ſatisfie the hunger of his Mind covetous of learning. But for the ſake of the benevolent Reader, I cannot chuſe but communicate to him this Information,* viz. *that the very Inſcription of this Treatiſe diſcovers a Secret* Sal-Armoniack, *and in divers places of the Sixth Part of my* Spagyrick Pharmacopœa, *mention is alſo made of a Secret* Sal-Armoniack; *wherefore I would have you to underſtand, that the* Sal-Armoniack *mentioned in my former Book, is of a property variouſly different from this, of which I purpoſe here to write. For this is prepared of Urine, but in the preparation of that, no Urine is to be uſed; becauſe that is no other than pure Silver diſſolved in* Aquafortis, *and precipitated by the help of a ſharp Salt-water. Where it is to be obſerved, that the Silver, in ſuch a Precipitation, attracts to it ſelf ſo many Spirits of the Salt, as by reaſon of them it is no more fuſible, like other* Luna *into a Metallick Form, but becomes penetrable as Oil into a Skin. That, in my Writings, is called* the Mercury of Luna.

Note. *Of* Saturn *alſo, after this manner ſuch a* Mercury *may be prepared, which is almoſt of the ſame efficacy as the* Mercury *of* Luna; *but in ſome Chymical Labours it may not ſo ſafely be uſed as the* Mercury *of* Luna. *This muſt be neceſſarily minded by thoſe who are unwilling to err in their Labours. Moreover, touching this Secret* Sal-Armoniack, *I think it needfull farther to adviſe, that either* Sal-Armoniack (*although both are diverſly prepared*) *being added to Metals or Minerals, takes to it ſelf and carries upward the pureſt part of that Metal or Mineral. Tet it is to be underſtood, that this is effected thus,* viz. *that the Metal is corroded by the ſharp Spirits exiſtant in the* Sal-Armoniack, *and ſo is carried upward by diſtillation; or volatilized, no otherwiſe than as if you ſhould add Sublimate* Mercury *to any Metal or Mineral for extracting Butter thence. Alſo it is to be minded, that whatſoever ſhall be prepared by the help of either* Sal-Armoniack (*made with* Luna, *or with Urine*) *all that riſeth much more pure than any ſublimate* Mercury *or common* Sal-Armoniack *can cauſe to aſcend. Theſe few things I thought neceſſary to be premiſed, touching the difference of either Secret* Sal-Armoniack, *that no Man may err through miſtake.*

Although much more ſhould be ſpoken here, touching our Sal-Armoniack, *which is made of Urine; yet Time, and my preſent Condition, prohibit my inſiſting more at large thereabout.*

But that every unskilfull Man may be rendred more skilfull in the Knowledge of this Definition, it is good for him to learn, that Urine is no other than the volatile Salt of thoſe Meats and Drinks, which we receive for the nouriſhment and ſuſtentation of the Body; and which are ſo digeſted and ſeparated by the Stomach, viz. *that the Sulphur, as a ſuperfluity, is by Nature diſcharged by the Bowels; but the Urine, as a volatile Mercurial Salt, ſeeks and finds for it ſelf an Exit through the Bladder. Now, it is more than ſufficiently manifeſt, that the greateſt part of Men live of Vegetables, as of Bread, Beer and Wine; alſo for Nutriments they uſe Fleſh, Fiſh, Butter and Cheeſe: which kinds of Meat and Drink, ſo ſoon as put down into the Stomach by a certain natural Coction and Fermentation are ſo inverted, as ſome natural Mercury is thence progenited. Whence, it is clearly enough apparent, that the before mentioned Mercury (which we with the aſſiſtance of Art know how to extract out of Urine) muſt neceſſarily have been an inviſible Mercury in Vegetables,*

bles, before it paſſed into Urine, and when it was not inverted in our Body. Which is a thing moſt ſurely true, and is confirmed to us by experience, viz. *that in all Vegetables (no one of them excluded, whether Wine or Grain, Honey or Sugar, or other fat Fruits, in which our vegetable* Mercury *is moſt copiouſly abundant; alſo by what name ſoever thoſe Fruits or Vegetables are called) the ſame* Mercury *is hoſpited; yea, it may be extracted from all Fruits, Trees, Herbs, or any common Graſs of the Fields or Meadows, and from all Boughs and Leaves of wild and manured Trees, if after you have cut them ſmall, you pour on them hot water, and then ferment the ſame.*

Indeed lean Herbs, according to quantity, give not forth ſo much burning Spirit, as Corn, Wine, or Sugar: But note; Graſs is prepared with much leſs coſt than Corn, Wine, or the Fæces of Wine or Beer. Alſo a good burning Spirit may be made of Grape-Stones, or the preſſings of Grapes; yet as for the ſweetneſs of that, you need not to take any care; becauſe in operating it is ſo amended, as it is rendred full as good as the beſt Spirit of Wine that is moſt rich.

This Arcanum *of preparing a true Univerſal Medicine of all Vegetables, for thoſe three known Kingdoms of ours, I take to be as great a Secret as was ever known to Philoſophers, or for the future can be known. For it is that, of which many have notably writ, yet in ſuch a Style, as they have obſcured, involved and hid the whole Work in ſo many Parabolical, Allegorical and Enigmatical Phraſes, as it is almoſt plainly impoſſible for any one profitably to learn any thing out of their Writings, unleſs his Eyes be ſingularly illuſtrated by God. But among others,* Albertus Magnus, Thomas Aquinas, Arnold, Lully, Braceſcus, *and eſpecially* Baſilius, *have writ of it evidently enough to ſuch as can ſee; but all they writ in obſcure words: And as* Paracelſus *knew the ſame, ſo it ſeems that was alſo known to* Helmont: *yet they were afraid to write of it for their own ſakes. But I now freely and openly divulging all things, do that chiefly for this Reaſon,* viz. *becauſe the moſt wiſe God (to whom I give Immortal Thanks) revealed this Secret to me not many weeks ſince; and I, according to the weakneſs of my Age, could labour but little therein, and that very difficultly; therefore keeping my Bed, by reaſon of my Illneſs, I cauſed ſome Proofs to be made of the ſame: whence I ſo found the verity of the matter, as I am now able ſafely to confirm the ſame to others, and can aver, that the true* Mercury *of* Philoſophers *is reconded in them. Although that hath hitherto been unknown to moſt Men, yet by me (becauſe in Philoſophy, Medicine and Chymiſtry, never any thing more magnificent than it, eaſier to be elaborated, or preparable with leſs coſt, at any time before came into my hands) it is ſo publiſhed, as I doubt not, but that many well-diſpoſed Perſons will confidently, readily and happily ſet their hands to the Work. For it is eaſie to acquire burning or diſtilled Wine in abundance, without any great charge: alſo an Inſtrument made of Copper, fit for ſeparating the* Mercury *from the* Sulphur, *will not coſt much: And laſtly, the Fixation of the* Mercury *will coſt little or nothing, becauſe it may eaſily be abſolved, in a very ſhort time, by One well skilled in the method of fixing. The Burning Spirit may be prepared, and the ſeparation of its* Mercury *from the* Sulphur *be compleated in the ſpace of one day: but yet it is to be underſtood, that this is ſpoken onely to thoſe who deſire but a ſmall quantity to experience the poſſibility of Art. If any one would have a larger quantity of Tincture, he indeed will have need of a longer time to prepare it in, as every one may eaſily conjecture.*

Whilſt I lay diſeaſed in my Bed, and afflicted with a grievous Diſeaſe (after I had by a long and ſerious ſpeculation day and night fundamentally ſearched the power of Art) in the ſpace of one Week, by the hands onely of my little Sons (for I could not truſt ſuch a Work with the unworthy Sons of this World) I made three ſmall trials or proofs onely in a very ſmall quantity, becauſe, by my Bed-ſide, there was no place for doing any great Work. Nevertheleſs, I am ſatisfied that I could do much more in eight or ten Days, and a far greater quantity, if God will be pleaſed to grant me ſtrength for ſo many Days.

Indeed to an ignorant Hearer, what Wiſe men have aſſerted will ſeem incredible to be believed; namely, that in every Herb and Graſs, the true Stone of Philoſophers lyes hid. For the ignorant of Nature wonder at this. But Spagyrick Philoſophers *have, now for many years paſt, publiſhed their Books touching the ſame, and affirmed, that of all things, from which the Elements may be ſeparated, the* Stone *of* Philoſophers *may be extracted and made; of the ſame I alſo, if need were, could alledge many Teſtimonies. May we not by Diſtillation and Rectification much more eaſily ſeparate the Elements from Vegetables, than from rude and hard Metals? And may we not moſt purely and moſt ſubtilly cleanſe their Element of Fire from them? That indeed is impoſſible to be extracted from Metals. But if we can, by the help of Art, turn the moſt pure Fire again into Earth, may not of this new Earth (when it is by the benefit of Art fixed, and rendred conſtant in Fire) be made a Matter purer, than all things in Nature? Every Man knows, that in Spirit of Wine is contained a great virtue comforting the Heart, but by reaſon of the burning heat, which it manifeſts in thoſe that immoderately uſe it, the ſame is avoided not without Reaſon.*

Now,

Now, if you ſhall ſeparate the Burning Sulphur *from the* Mercury, *in the bottom will remain onely a temperate, and to all Conſtitutions (which are vulgarly called Complexions) gratefull pure* Mercury, *in the form of a clear ſweet Water, which* Philoſophers *call their* Water of Life, *and that not imprudently. For the* Alimonies of Life *are included in it, and this* Mercurial Water, *or true* Aqua-vitæ, *may be ſafely adhibited in all Diſeaſes; always, provided that this Spirit be prepared of Wine, Corn, or of Herbs not ſtinking and venomous. But for Metallick Tranſmutation, every diſtilled Wine is conducent, of whatſoever matter it ſhall be prepared. Yet that, in the form of Water, is able to exerciſe no power over Metals, but muſt firſt be reduced into a Red fixed Powder, called by Philoſophers* Gold of Philoſophers, Horizontal Gold, Tinging Gold, *and* Living Gold. *And, in a word, I ſay you cannot find any thing pertinent to Medicine and Chymiſtry, more excellent than our Red fixed* Mercury of Wine: *for it is the true* Phœnix *or* Bird *of* Titan, *feeding its Young with its own Blood; alſo a true* Salamander, *which dyes not, but is nouriſhed and augmented in Fire: and more briefly,* It is all in all things. *Moreover, Philoſophers confeſs that all things lye abſconded in all, and in good* Aqua-vitæ *all Metals are ſpiritually found; which I my ſelf have in very deed experienced, being otherwiſe unable to verifie the ſame. O noble Hermetick Art, and Queen of all Sciences! how baſely and unworthily art thou caſt down, trod under foot by ſtinking Swine, and contemned by ignorant proud Fools! Nevertheleſs, I doubt not but that this little Book of mine will open the Eyes of many blinded with Ignorance, and direct many Readers unto the path of* Verity; *as my Treatiſe lately publiſhed, intituled,* Of the Salt of Philoſophers, *hath already been the Authour of much good to many. For more than one of many, who have ſlighted Chymiſtry, having peruſed that* Enchiridion, *according to my Information, have again fallen in love with Chymiſtry, ſet about the Work (renewing their omitted labour) and prepared the* Salt *of* Philoſophers, *gave good proofs thereof, and having wrought in it for certain Days, at length gloried of their ſucceſſes in Tranſmutation of Metals. Which Stone notwithſtanding is not to be compared with that which is made of Wine or Corn; but in compariſon of that is to be reputed as a Clod of Earth to a moſt beautifull Pearl.*

Wherefore as I before ſaid, and always ſhall ſay, I believe that a Medicine and Tincture more ſublime than the fixed and red Mercury of Wine, hath never been known by Philoſophers. In the mean while, let every other Man believe as he liſteth, it ſufficeth me that I have written the Truth, and refuſed to carry hence with me into the Kingdom of Darkneſs the greateſt Secret of the whole World. But the Reaſons why I here over-haſtily break off the Thread of my diſcourſe begun, and in no-wiſe diſcover the Method by which the Burning Spirit may be prepared, and the Mercury *latent therein be ſeparated from the ſame, and reduced into a fixed Tincture, are weighty and conſiderable. For the whole Work, from the beginning to the end, is ſo very vile and eaſie to be performed, as every Corydon or rude Shepherd (ignorant af all Chymical Arts) would underſtand and imitate that Method of preparing the ſame. Wherefore it is beſt to deſiſt from any further explanation. Becauſe, to whomſoever God will give it, he will ſo eaſily find it out, as there will be no neceſſity of ſpeaking one word more than I have already ſpoke. Beſides, for ſuch inconſiderateneſs, I ſhould be able to give no juſt Account before God, the Judge of the Living and of the Dead, if this moſt ſecret Secret of Secrets ſhould as a Grain of Salt be ſowed among the ungratefull and unworthy People. But the World is too well known to me already: yet I will openly ſay this,* viz. *that the pooreſt Man, as well as him that is wealthy, may attain to this ſupreme Work; becauſe, for preparation of that incomparable Medicine, no chargeable Materials, nor any long time are required.*

Truly, unto me are known divers famous particulars, by the help of which, not onely Silver, but alſo all other Metals are converted into Gold and Silver with great profit, yet are more difficult to be elaborated than that great Univerſal Work. Wherefore this alſo, among all other fruitfull Chymical Secrets deſervedly doth, and undoubted always will obtain the Priority.

Now, Son of Art, candidly accept this my Fatherly Inſtruction, and Friendly Admonition, and do not at all commit any thing to Faithleſs Men, of which thou maiſt have occaſion to repent afterward. Accordingly, to all the Diſciples of Hermetick Philoſophy and Medicine, I wiſh the ample Bleſſing of God, here Temporal, and in the life to come Eternal; heartily praying, that the moſt clear unextinguiſhable Light of God, may perfectly enlighten them, as it did me at the firſt. Amen.

Of the Secret Sal-Armoniack.

TOuching this our Secret *Sal-Armoniack*, I have made mention in divers of my written Books; but the way of Preparing it I have left to be divulged in this place. For after I was assured, that many had laboured much to find out its Preparation and Fruitfull use in Medicine and Chymistry; I resolved no longer to conceal the Preparation and profitable use in Chymistry, of our *Salmiack*, from the Lovers of our Profession; but chiefly for the sake of the Sick (to whom it may be a very great comfort and solace) I chose rather openly to divulge it, without any privy concealment, in these my Writings; hoping that by the publication of this, I shall do good to many thousands of Men, and for a sign of triumphal Joy crown the Head (as with Laurel) of the victorious Queen of the Spagyrick Art.

First of all, it is to be observed, that this Name is imposed upon this Subject, because it in many things agrees with common *Sal-Armoniack*. It pleased us to add the Epithet of *Secret*, because this Salt is known to very few in the whole World; and they who acquired it to themselves, neither published it, nor exposed the same to common use, but kept it to themselves as a great Secret; and as often as they made mention of that Salt in their Writings, they named it their *Salmiack*; for proof of which, if need were, I could produce many Examples.

Cosmopolita, being about to speak of this our *Salmiack*, cryes out thus: *O our Sea! O our Sal-Armoniack!* His *Sea* was Oil of Vitriol, and his *Salmiack* the Volatile Spirit of Urine. When these two are joyned together, they give forth from themselves our Secret *Salmiack*; by the help of which, so many wonderfull Works are performed in Medicine and Chymistry, as you shall here following hear.

Paracelsus and *Helmont* called this Salt, *Alcaheſt*; being that, of which the former writ little, but the latter very many things; and yet both kept the same secret to themselves onely, insomuch as *Helmont* discovered it not, even to his own Son; and other Men, his intimares, requiring it of him, he put off, saying, *It is an Ens very difficult to be acquired:* and thus he freed himself from the importunate Intreaties of many. And how little others could get out of him, is manifest by the following Saying, which is thought to be his. *The Liquor* Alcaheſt *is made of Blood and Urine.* It is credible that he might make such an *Alcaheſt* of those Subjects. But the reason why that kind of *Alcaheſt* may be prepared of Blood and Urine, as well as of Oil of Vitriol and Spirit of Urine, is this: There is a great affinity and similitude between the Macrocosm and Microcosm, *viz.* Man; insomuch as whatsoever may be had in the Macrocosm, may also be found in the lesser World Man. For as in the great World an Universal Acidity, *viz.* Vitriol, commonly is generated in Subterranean Fibres, Beds or Veins, and is there kept in perpetual Digestion by the Central Fire of the Earth, and at length ripened into Mineral and Metallick Bodies; so also, in the Body of every Man, the Blood of the Veins (as an Universal Microcosmick Acidity) is generated, and by long Digestion of the central Fire of the Heart augmented, meliorated, and at length transmuted into Flesh, Skin, and Bones. Therefore, in the Blood of Men or Animals you may find an Acidity, like to that which is found in the great World: Hence it may be said, that our Secret *Salmiack* may as well be prepared of the Blood and Urine of Animals, as of Oil of Vitriol and Spirit of Urine. Nevertheless, I say there is a vast difference between these two; for Oil of Vitriol may be amended and rendred more subtile by Rectification, which Subtiliation cannot be effected with the Vitriolate Acidity of the Blood of Animals. Therefore we deservedly give the Priority to this rectified Oil of Vitriol, as being that, which in every Chymical Labour is found far more efficacious than that of Blood. For this cause leaving that Blood, let us set about the Preparation of our Secret *Salmiack*, with cleansed Oil of Vitriol and Spirit of Urine subtily rectified.

The way of making our Secret Sal-Armoniack.

R*Ecipe* of Oil of Vitriol excellently well defleg-mated and rectified, one pound; upon which Oil of Vitriol, leisurely pour on so much highly rectified Spirit of Urine, as untill there is no more action each upon other, but they be mortified and still. In that Conjunction, from two Contraries, ariseth a middle Salt. This Operation being rightly performed, you will find a sharp penetrating Liquor, in which is a power of carrying upwards with it self the purest Essences from Animals, Vegetables, and Metals: which is what no other Entity in Nature is able to perform, as we purpose to shew. Therefore if any one, desirous to make of this Salt Liquor a dry *Salmiack*, do in gentle heat of *Balneo* abstract the unsavoury Water thence, in the bottom will remain a fair white Salt, which is our Secret *Sal-Armoniack*; by the benefit of which wonderous Works, may be performed in Medicine and Chymistry, as hereafter you shall hear. Now follows

The Use of our Salmiack, *by the help of which, from* Vegetables *may be extracted very efficacious, and indeed incomparable Essences.*

HOW or which way the Ancient and Modern *Spagyrists* prepared their Essences of Vegetables, is now long since well known throughout the World, *viz.* by Spirit of Wine. Which way of Extracting is indeed of it self a Work very chargeable; yet Spirit of Wine readily extracts the Essences of Vegetables and Animals, leaving the unprofitable Fæces behind. Also, it is not unknown to us, that Spirit of Wine in extraction so notably changeth the Virtues of things extracted by it, as the Extract is of less force than the Simple whence it was made, and that most manifestly in *Cathartick*s or Purging Simples, insomuch as commonly the Dose of the *Extract* must be greater than of the *Simple* it self. The reason is, because all Purgers acquire the greatest part of their Cathartick faculty from that crude and immature Substance, with which they oppose the Stomach, and therefore are not entertained by it, but presently expelled, during which Expulsion the Excrements also are cast out. Therefore the stronger Crudity is predominant in Purging things, the more impetuously do they move the Stomach; and the more strongly the Stomach casts out and expells that, so much the more vehemently also are the noxious Humours of the Body cast up. If a Cathartick be too crude, rough and

and immature, the Stomach rejects it much more ſtrongly, becauſe the whole of Nature is thereby diſturbed, and with all its might endeavours wholly to expell ſuch a rude gueſt. In which violent expulſion, the Radical Humours are expelled out of the Body, together with the Excrements, that the Body may be totally freed and disburthened of the pernicious filth of them.

The Stomach ſo abhors ſome Vegetables, and is ſo impatient of giving them any time to abide there, that they may by little and little be expelled downward by Seidge, as it (enraged with ſo great nauſeating and loathing) violently caſts them up. In which Excretion a tenacious viſcous Choler, always hurtfull to the Stomach, is expelled, which would difficultly otherwiſe be caſt out by gentle Purgations, as is ſeen in *Aſarabacca* and *Hellebore*. For as often as they are taken by a ſick Man, without any previous Preparation, they continually excite Vomiting; but if extracted with Spirit of Wine, they vomit not, but onely work downward.

By all which it appears, that Spirit of Wine, in extracting the Eſſences of Vegetables (by its natural power) ſo notably changeth the Virtues of Herbs, as it is not fit to be uſed for all kinds of Extractions; and that by reaſon of its Nature varying or altering the property of things. Nor can you, in ſome Diſeaſes, ſafely uſe thoſe Extracts which are made by Spirit of Wine, becauſe Extracts are heightned in their Heat by the Spirit of Wine, and therefore ſhould be avoided in acute or burning Diſeaſes. On the contrary, our *Menſtruum*, viz. our Secret *Sal-Armoniack*, in Extraction, alters not the Virtues of Species for which it is uſed, but extracts from them onely what is moſt pure, and carries over with it by Alembeck, a certain moſt ſweet Eſſence, which Spirit of Wine can in no-wiſe perform. Therefore we deſervedly give Priority to our Liquor *Alcaheſt* in extracting the Eſſences of Vegetables and Animals. Yet we would by no means labour to bring Spirit of Wine into contempt, ſince it, in ſome ſubjects, ſo excellently exerciſeth its power, as it gives place to no other thing. But the Water of our Secret *Sal-Armoniack* perfects its Extraction in a far differing manner; becauſe, by the help of Art, that conjunct of two ſharp penetrating Entities (viz. *Acid Oil of Vitriol*, and *Alcaliſate Spirit of Urine*) is reduced into one temperate middle Salt, which Salt is almoſt of the ſame diſpoſition as common *Salmiack*, except that in all its Operations it is found to be more ſharp, more penetrating and more efficacious than it.

Now let us come to the matter it ſelf, that we may ſee of how great uſe our *Alcaliſate Vitriol*, or *Vitriolate Alcali*, is for preparing ſome famous Medicine. I ſuppoſe it will be worth my while, if I firſt of all begin with that Medicine which *Paracelſus* taught to be made of *Aloes*, *Myrrh*, and *Saffron*, and is by venerable Antiquity, and by all Authours of long life highly commended, and named *Elixir Proprietatis*. And ſince *Paracelſus* in deſcribing ſo noble a Medicine, uſed few words, but enlarged them much in extolling his *Elixir Proprietatis*, it will not be amiſs for us, in this place, to tranſcribe his own Words following, thus:

" So alſo Nature ſheweth us an *Elixir*, is that " which of Natural things may be made compleatly " perfect in its proper Eſſence. Such is the *Elixir* of " *Myrrh*, *Saffron*, and yellow *Epatick-Aloes*. But " whence they have this power, we have ſhewed " in the generation of them. But we come now to the Proceſs, (omitting their beginning, of which we ſpake before) which runs thus.

" *Recipe* of Myrrh, Epatick Alloes, and Saffron, " of each one Part, which digeſt together in a Pelli- " can placed in Sand, for two Months with gentle " heat. Then by Alembeck ſeparate the Oil from " the Fæces without Aduſtion. This Oil digeſt to- " gether with an equal Weight of the Circulate for " one Month, afterward keep it.

" In this are all the natural Vertues of a Balſam, " and a greater conſervative Vertue for thoſe that " are aged, than is lawfull for a man to utter: " becauſe from it proceeds not one Age onely, but " 4, 7 or 10, *&c.* It is ſcarcely poſſible to expreſs the " Vertues and Natures of it: But as we iudge, " enough is diſcovered by us already, which we think " needs no further Interpretation.

Here *Paracelſus* deſcribes his *Elixir* in words ſo obſcure, and likely to cauſe Errour, as no man untill this day could ever prepare any thing that was excellent, according to the tenour of his Words: *Helmont* among others complaining, that he concealed the uſe of the Alcaheſt in deſcribing the manner of that Preparation. For whoſoever uſeth that, in ſuch a Preparation, he obtains a Medicine of ſo great vertue, as it is able to do whatſoever *Paracelſus* aſcribes to his *Elixir Proprietatis*.

But if any man be not ſatisfied in what is here publiſhed by me, let him conſult *Helmont* diſcourſing thereof more at large.

Now behold here preſented to thee my Proceſs for preparing a Medicine of theſe three *Species* reduced to Powder, *viz.* of Myrrh, Alloes and Saffron. I took of that mixture 8 Lotones, 4 Ounces, which I put into a Phial, and upon the ſame poured one Pound and half of our good Alcaheſtick Liquor, theſe I ſet into a warm Bath to be digeſted for two or three Days. During this digeſtion our ſharp Liquor diſſolved theſe *Species*, and very well united it ſelf to them. This being done, I poured the whole mixture out of the Phial into a low Cucurbit of Glaſs, and well luted the Head to the Receiver, and by gentle heat of *Balneo* cauſed whatſoever would aſcend, to be gathered apart in ſeveral Recipients

1. A white penetrating Aromatick Spirit, of a moſt fragrant Odour according to *Helmont*'s words.

2. A yellow and red Spirit, and both indeed very efficacious. Yet each of theſe ſhould be received apart.

3. Laſtly toward the end (after all the moiſture is aſcended, and the Fire is a little ſomewhat encreaſed) a ſtrong ſcented red cleaginous alkaliſate Liquor; which is ſuch as ſerves inſtead of a Balſam, moſt excellent, preſently helping or very ſalutary in all green Wounds and fiſtulous Ulcers. The ſubtile Spirit ſhould be adminiſtred inwardly, for comforting or ſuppling the Body with all its internal Members, and for preſerving the ſame magiſtrally from all vitious affects. Such a moſt preſent Remedy is earneſtly deſired, by the aged and weak. The Ingredients are of a Balſamick Diſpoſition, and the preparation of them is artificial and ſubtil, ſo as a famous Medicine cannot chooſe but be made of them. For our *Salmiack* is of ſuch a Nature, as by it all Vertues of Vegetables, Animals and Minerals are exalted, amplified and meliorated, and that by reaſon of the Exaltation by it inferred on the Subjects in elaborating; as may more exactly be learned, when any one goes about to prepare the ſame, and ſhall

as

as it were with his hand, palpably touch the vertue, and diſcern the verity thereof. Therefore here is inſtituted a Proceſs of preparing Saffron, Aloes and Myrrh, by which you may know how to work with other Vegetable and Animal Subjects, ſo as we have no neceſſity of preſcribing a peculiar Proceſs for every Medicine. Here onely it is to be noted, that an accurate Regard is to be had of weight and meaſure in mixing the Subjects with the Liquor Alcaheſt. For if leſs of the Armoniack Liquor than is fit be added to a dry matter, all the Liquor ſo includes it ſelf in the dry matter, as little of the Spirit can aſcend in diſtilling. But if more of the Liquor be poured on than is fit, the aſcending Spirit will not be efficacious enough, becauſe the vertue of that Subject diffuſeth it ſelf too largely into that aboundance of Spirit. Wherefore in all things meaſure and weight are to be obſerved. Dry *Species*, ſuch are Herbs, Roots, Seeds and Flowers, drink up much Water; but Woods not ſo much, Stones and their like, much leſs than they. Therefore, if any one, in labours of this kind would do ſomething to purpoſe, he had need to be wary, that he do neither too much, nor too little, but in all things obſerve a mean: ſo doing, he ſhall ſuffer no loſs, nor ever labour in vain. For it is almoſt impoſſible to deſcribe all *Arcanums* ſo evidently, as every Clown may comprehend the ſame without any ſearch.

I have here laid Foundations with reaſon ſufficient, every one may build, or not build upon them as he pleaſeth. Alſo he may read *Helmont*, who did indeed of this matter write largely enough, yet he is not always to be underſtood according to the Letter; for in moſt places of his Books, he concealed his manual Operations, eſpecially in his Book of the Tree of Life, where he treats of the Cedar Wood. The preparation of the ſame requires no tedious long ſpace of time, but it may be performed in a few hours. Indeed it would be the part of good Phyſicians to introduce this Preparation of more noble Medicines into their Apothecaries ſhops, and thence to exclude ſome part of their corrupted Remedies. For this being done, ſo many men would not be baſely neglected, nor untimely hurried out of this Life, by the uſe of unprofitable Medicaments, as too too often now are.

It is not enough for you to have a Name from *Galen*, and in the mean while not at all tread the Footſteps of *Galen*'s vertues. *Galen* was an honeſt Heathen, and whatſoever he had gathered with much and long ſtudy, he left to us accurately written before his Death.

How experienced a man in Medicine *Hippocrates* was, his Writings do clearly ſhew.

Alſo that *Avicen* was an induſtrious Phyſician, by his remaining Litterary Monuments, is very manifeſt, and eſpecially by that Epiſtle, which he writ to his Son *Aboali*; for in that he commands him firſt to furniſh himſelf with ſixty Pound of moſt pure Mercurial Water (whence he ſhould make the univerſal Medicine) before he preſumed to proceed to Coagulation of the Stone.

Theſe indeed were men adorned with high Experience and a good Conſcience, who gloried not in the bare Name of Chief Phyſicians, but proved themſelves ſuch indeed, ſhewing, that they were not idle Adorers of the Goddeſs *Vacua*, but men moſt laborious, as becomes every conſcientious Phyſician to be.

Touching that Mercurial Water, which *Avicen* commended ſo much to his Son, for making (of it) the Univerſal Medicine, we ſhall here following (*Jehovah* aſſiſting) ſomewhat more largely ſpeak, *viz.* how it, by our *Salmiack* may be extracted from Metals, and then be coagulated into an Univerſal Medicine.

Indeed, particular Medicaments are not to be contemned but to be eſteemed as good things, to them that make a good uſe of them. But Univerſals are ſought by Phyſicians, being ſuch, as by which they can get more Honour and Riches, than by Particulars, becauſe they are known even to every old Woman. Univerſals are not to be uſed after the manner of Particulars, particularly to ſerve for this or that Member of the Body, or to reſiſt and heal this or that Diſeaſe onely: but they ſeek out every *Chachexy* (which lies privily diſperſed through all parts of the Body, impairing Health) and having ſought it out, caſt it forth of the Body, as well viſibly as inviſibly through all Emunctories, as ſhall ſeem good to Nature, and will be moſt conducent to health. Univerſals conſume occult Diſeaſes hidden in the Body of man, as Fire conſumes Wood. Alſo Univerſals tinge every vitious Habit of the Body (which otherwiſe can be expelled by no particular Medicine) and tranſmute it into a better State, ſo as the Evil of the Diſtemper is inverted and converted into good, in the place where it is hoſpited, no further expulſion being required. Of like Univerſals, we will afterwards (God giving leave) ſpeak more at large. Now the time admoniſheth us to return to our *Sal Armoniack*, to contemplate what farther fruit of Utility it is able to effect in Medicine.

Helmont, in his Treatiſe of the Stone makes mention of a certain Medicine, which by his Alcaheſt he prepared of *Paracelſus* his *Ludus*, which would reſolve the Stone in the Bladder, and expel it in fourteen Days. *Paracelſus* aſcribes to his *Ludus* wonderfull Vertues, which it exerciſeth in breaking and expelling the Stone of the Reins and Bladder. In which *Helmont* poſits his Foundation, ſhewing where ſuch a *Ludus* may be found, and how by his Alcaheſt it may be prepared into a Medicine ſo admirable, as it becomes the ſupream Remedy againſt the Stone.

As touching the *Ludus* it ſelf, *Helmont* ſaith of it, that it may be copiouſly found in the Scald ſhores at *Antwerp*, and that it for the moſt part conſiſts of a certain volatile Macrocoſmick Urinous Salt: and I making ſearch into the ſame, have found it juſt as he deſcribed. Likewiſe, I alſo, according to his preſcribed Rule, endeavoured to make ſuch an excellent Medicine, and then found the Liquor of the *Ludus* to be ſuch as he affirms he himſelf made by his Acaheſt, *viz.* this way.

I took one Pound of that *Ludus* beaten to Powder, and mixed it with one Pound of our Secret *Salmiack*, and thence drew off the volatile Humidity with gentle Fire in a coated Retort; and then augmenting the Fire until the Retort was very hot all over. When all was cold, I found the *Ludus* with the more fixed part of our *Salmiack* melted together into a yellowiſh dark coloured Stone, which (according to his Doctrine) I laid in a moiſt Cellar to be diſſolved, and that Stone in 24 hours was reſolved into a greeniſh Liquor, and it had a burning Taſte upon the Tongue, yet it is not loathſome to be taken into the Body, with Wine, Beer, or other ſuitable Vehicles of Water. I my ſelf alſo have given this Liquor to ſome troubled with the Stone, who by taking it were

were greatly eaſed. But that the whole Stone ſhould by help of that be reſolved and caſt out, in ſo ſhort a ſpace of time, I have not yet found. Hence here it ſeems to me, that *Helmont* (as did *Paracelſus* in the Preparation of his *Elixir Proprietatis*, and the incredible Vertue thereof) hath extolled his Remedies with a too much elated Style. They are aſſuredly admirable Medicaments, but that they are able to effect ſo much (in all men without diſtinction) as are aſcribed to them, I cannot aſſentingly witneſs, although I was at great expences, and not a little turmoiled about them, yet in the mean while I found out many excellent things, the Declaration of all which would be too tedious to be here inſerted. But I muſt needs, in this place, inſert ſome few of thoſe many things I then found out.

If any one apply to the Seeds or Roots of thoſe Herbs, which are commonly wont to be adminiſtred, for expelling Urine and the Stone, (the Seeds or Roots being firſt reduced to Powder) a little of our *Salmiacal* Water, and digeſt it in gentle heat of *Balneo* for 24 hours, and afterward diſtil it, a moſt efficacious Spirit will aſcend; which Spirit I have found to be more excellent in expelling the Stone, than the *Ludus*. In like manner thoſe inſects, which ſtrongly provoke Urine and the Stone, I have alſo digeſted and diſtilled with our Liquor of *Sal Armoniack*, and got a Spirit more ſtrongly expelling Urine, than any Spirit prepared of Herbs. Wherefore this is to be warily uſed, and ſuch forcibly expelling things well obſerved, among which more forcible than all other are the fat evilly ſmelling black Worms of *May*, and Cantharides.

After the ſame manner, as we have taught to be here done, may alſo be inſtituted an Operation for extracting (by diſtillation) from all Vegetable and Animal Subjects their moſt potent Vertues and pureſt Eſſences, by our Vitriolate Alcalick Water; *viz.* from Aromaticks, egregious Cordials; from Woods and Roots of Sudorifick Herbs, famous Diaphoreticks; from ſoporiferous Simples, admirable Anodines; from purging things moſt excellent Catharticks, *&c.* But there is no reaſon I ſhould longer inſiſt on theſe things of leſs value, ſince every skilfull man can prepare himſelf ſuch medicinal Spirits as he hath need of. Here he cannot eaſily commit error, ſince for all Herbs, Seeds, Roots, Flowers, and Woods, there is but one onely way of preparing them into moſt efficacious Eſſences, by our vitriolate Alcaly. But a better way than any other, yet to be diſcovered, how by our Urinous Liquor, yet more efficacious Eſſences may be extracted from Vegetables and Animals, is this:

We are not ignorant, that Spirit of Wine, which is for the moſt part generally uſed for Extraction of Vegetables, doth not ſufficiently extract them, nor carry upwards with it ſelf what is extracted; but *per ſe* onely aſcends, and leaves the Extract in the Bottom of the Veſſel. On the contrary, our vitriolate Spirit of Urine (much more ſharp than Spirit of Wine) doth not onely powerfully invade Vegetables, and attract to it ſelf their Eſſences, but alſo in diſtillation carries them up with it ſelf, which is impoſſible for Spirit of Wine to do. For although the Spirit of Urine (according to the external Face) doth as it were mortifie the corroſive Oil of Vitriol, and change it into a volatile Salt, and the Oil of Vitriol coagulates the ſubtile Spirit of Urine into a volatile Salt, inſomuch as of two unlike Entities is made a middle Salt; yet both thoſe unlike parts are not wholly changed in their former Nature. For the Acidity of Vitriol remains yet acid, and the Urinouſneſs of the Urine urinous; and both alſo by the help of Art may again be ſeparated each from other, ſo as either of them may perfectly recover its own priſtine qualities, and nothing of them be found to be loſt. As for example, ſuppoſe

It be required, that I ſhould recover my Spirit of Urine, as pure and ſubtile as it was when poured on the Oil of Vitriol: Then I add to our *Salmiack* (according to juſt meaſure and weight) onely ſo much *Lixivium* as of the Acidity is mortified, and the Spirit of Urine aſcends ſubtilly pure again, and full as good as it was before its conjunction with the Oil of Vitriol. But the Oil of Vitriol is altered, and by the Salt of Tartar reduced into a middle Salt, which alſo wants not its Fruit of Utility in Medicine and Chymiſtry. If you would from this mixture recover our Acidity with the Spirit of Urine, add to our *Salmiack* a Subject eaſily diſſolvable; mix and give a gentle Fire, for then the Acidity ſets upon that Subject eaſie to be diſſolved, and diſſolves the ſame, and makes abundance of its concomitant Spirit of Urine to aſcend, which in its aſcent takes up with it ſelf the pureſt Eſſence of the Subject added, looſed by the Acidity in Solution, and thenceforth may be uſed for Medicine and Chymiſtry, according as the Subject was. For Example, If I add red Corals beaten to Powder to my Alcaheſtick Liquor, the Acidity corrodes thoſe Corals without any delay, and lets go the Spirit of Urine, which brings over the helm with it ſelf the Eſſence of Corals. But the Acidity, when you pleaſe may by diſtillation be ſeparated from the Corals. If to our Liquor be added Pearls, the Spirit carries the vertue of them upward with it ſelf. And if you add Stones, Minerals and Metals, the Spirit of Urine doth likewiſe carry up with it ſelf the Eſſences of them. But the Acidity remains in the bottom with the Stone or Metal, and may afterward diverſly be again ſeparated from the Stone or Metal, and applied to this or another uſe.

Having already heard how the moſt pure Eſſences of Vegetables and Animals, by our ſecret *Sal Armoniack* are to be diſtilled by aſcent, let us now alſo ſee, how Metals and Minerals may be highly purged by the ſame, and reduced to their firſt matter: which firſt matter is no other than a moſt ſubtil Mercurial Water, in which the pureſt part of the Metal is latent in the form of running *Mercury*, which *Mercury* is fit for preparing whatſoever Work you will of it, either *Sol* or *Luna* particularly, or a true Univerſal Tincture, vaſtly tinging. Nature, in the Bowels of the Earth did primordially generate all Metals of ſuch a volatile *Mercury*. For when the *Aſtrums*, through the Air, ſeminate their metallick Seed, that Seed is from the Air introduced into the Earth, where that, as matter clean or unclean offers it ſelf, produceth Metals either pure or impure. Wherefore Philoſophers rightly determine the Root of Metals to be fited in the Air, but their ſtem and branches in the Earth. Daily experience teacheth us to give credit to this, as often as in digging we come to the deepeſt ſcituation of Metals, great Experiments of this matter diſcover themſelves to us, but becauſe touching this enough hath been ſaid already, we forbear to proceed further in ſuch a Diſcourſe. Here enough is ſaid, namely, that we know the Original and beginning of all Metals to be no other, than an Airy ſubtile Spirit, in which are reconded the Sul-

phur and *Mercury* of Metals. Therefore, ſince here my purpoſe is to give ſo great Information to every moſt unskilfull man, and as it were to put that in his hands, which may be done by the help of our ſecret *Salmiack*, I think not amiſs openly to diſcover certain Examples of Proceſſes, evincing the power of the ſame. Wherefore I here offer a Poſſible

Way of preparing a ſubtile Mercurial Water (from which a running Mercury, called by Aucient Philoſophers, the Mercury of Philoſophers, may by the help of Art be ripened into a moſt potent Tincture) out of all Metals by the benefit of our ſecret Sal Armoniack.

LET the Searcher of Art know, that the Preparation of the *Mercury* of Metals and Minerals, is of a diverſe kind.

But generally, a Mercurial Water may be prepared of all Metals, yet of one more eaſily, than of another.

Recipe the filings or raſpings of a Metal, as *Mars*, *Jupiter* or *Venus*, one Pound, with which mix half a pound of our dry *Salmiack*. If theſe be well mixed and by Retort diſtilled, the metal will be corroded by the Acidity, and the *Mercury* thereof be freed from its bonds, or ſeparated by Diſtillation, becauſe the Spirit of Urine carries that up with it ſelf inviſibly; but when the Spirit is extracted from it, it becomes viſible, as afterward ſhall be taught.

If you pulveriſe the Remanency or Reſidue of the Metal, and boil it with Water, you will have the Vitriol of that Metal you uſed, *viz.* of *Mars* green, of *Venus* blew, of *Jupiter*, *Saturn* and *Luna*, white, of *Sol* yellow. The cauſe of ſuch Vitriol is this: ſince the Acidity of our *Salmiack* adheres to the Metal, it in ſome ſort diſſolves that, and in ſuch wiſe prepares it, as by the help of common Water, the ſame may eaſily be diſſolved.

Note: If the Metal (which ſhall remain in the bottom of the Veſſel, after the Vitriol is extracted from the ſame by the help of Water) be mixed with freſh *Salmiack*, that will again be conducible, but not yield you ſo much *Mercury* as you got the firſt time. And if you make the ſame trial a third time, a little *Mercury* will aſcend, but not ſo much as did the ſecond time.

Which cropping of golden Branches from the ſhaded Tree *Virgil* excellently diſcovered when he ſaid: One being pulled off, another ſucceeds, if the Fates call thee, otherwiſe by no ſtrength, nor any Iron, canſt thou pull off that Branch. Of which cropped or pulled off Branches, the firſt is greateſt, and moſt rich with Gold; the ſecond is leſs and more poor; the third much leſs and moſt poor. Therefore it will be no profit to you to pluck off more than one Branch, but it is better in proceeding further, always to take new matter.

Out of that Vitriol in another certain manner, *Mercury* may again be extracted, which *Mercury* will be far more noble than the firſt, as ſhall be ſhewed more at large here following.

In the mean while, to the Lovers of this moſt noble Art, I cannot chooſe but demonſtrate a wonderfull thing, which is this: Whenſoever you ſhall pour Spirit of *Jupiter* (prepared in the above commemorated manner, and moſt ſubtily rectified) upon the Spirit of *Mars*, the *Mercurys* both of the *Mars* and *Jupiter* will ſuddenly embrace each other, and be connexed in ſuch a bond of Love, as leaving the Water, they will conjunctively ſettle to the bottom in the form of very ſmall golden Atoms; which Atoms of Gold, in that moment in which they are formed of both the *Mercurys*, you ſhall ſee converted into conſtant and fixed Gold. Which I take to be one of the greateſt Wonders, which ever came to my hand in all my Chymical Labours. If I had tried this Experiment but once, I might my ſelf have doubted the truth of the ſame. Indeed I have found out the cauſe of this ſwift fixation of *Mercury*; but I ſhould do very inconſiderately to divulge the ſame. *Paracelſus* writes in his Heaven of Philoſophers, that no melioration of Metals is to be expected, unleſs they be firſt ſpiritually mixed. Other Philoſophers likewiſe ſay, Metals are firſt to be reduced to their firſt matter, that is, into a ſubtile Spirit, before they can be nobilitated and bettered: which I know to be conſentaneous to verity, according to the Teſtimony of the following Example; which is another wonderfull Experiment, to be performed (by the Spirit of *Jupiter*) thus.

Diſſolve a little Gold in common *Aqua Regia*, into which Solution pour a little of our mercurial Water, mix it by ſtirring or ſhaking the Veſſel well: then the *Mercury* of *Jupiter* in a magnetick way, continually attracts the Gold to it ſelf from the *Aqua Regis*, and tingeth the Water with a Blood Red Colour, at length the Gold, with the *Mercury* of *Jupiter* conjunctively will be precipitated to the bottom of the Veſſel, in the form of a purple Powder: which being edulcorated and reduced with *Borax*, the greateſt part of the *Mercury* vaniſheth, but a little of it will remain with the fixed Gold, and render that ſnow like and friable. By which we may ſee in how great Love Gold anſwers to Tin.

Yet this is not the true way of preparing any thing eminent, and to purpoſe of both. Therefore, if any one expects a noble product from both, he muſt with gentle Fire fix this purple Gold, that the *Mercury* of *Jupiter* may not fume away, but remain with the Gold.

In both theſe recited Experiments to our ſight is expoſed ſo ſwift a Fixation of *Mercury*, as every man, although but of weak Apprehenſion, may eaſily ſee, that the Tranſmutation of Metals is truly true, and that the ſame (by the help of the fixed *Mercury* of Metals) may be done by projection in a moment. For *Mercury* fixeth *Mercury*, being joyned in a juſt proportion. Therefore if volatile *Mercury* can do that, how much more will the ſame, when fixed perform, being that, which bears about it ſelf its own Sulphur.

Athough I could as well diſcover other ways of preparing a good Mercurial Water of a Metal, by our ſecret *Sal Armoniack*, yet I conſider, ſuch a Liberty of publickly imparting things, would rather be injurious, than profitable; becauſe Pearls would be without diſtinction, caſt before every ſordid Swine. But more than enough being already publiſhed, Time admoniſheth us to deſiſt, eſpecially becauſe there is an intire Treatiſe of the *Mercurys* of Metals written and publiſhed. Yet I muſt confeſs, that this *Mercury*, prepared by the help of our *Salmiack*, is of another nature and property than the other prepared in another manner. There is little elſe now remaining, unleſs, to ſhew the way of extracting *Mercury* from Minerals, by help of our ſecret *Sal Armoniack*; which *Mercury* is able to effect as much in Medicine and Alchymy, as the other extracted out of Metals. Here follows

The

The Proceſs.

Recipe of Antimony pulveriſed one Pound, of our *Salmiack*, ½ a Pound, theſe well mixed, diſtil by Retort, and our *Salmiack* will all come off, and by the Alembick carries with it ſelf the moſt pure *Mercury* and Sulphur of the Antimony, of a Black Aſh Colour, which Sublimate is named the Head of the Crow. For if you caſt a little of it into pure Water, the *Salmiack* will melt, and the *Mercury* and Sulphur will remain in the Veſſel like a gray Powder, which if you dry, and then touch it, you will find it like to thin light Feathers, whence it acquires to it ſelf the Name of the Crows Head. Therefore, when you ſhall make it hot in a Crucible, it melts into a red Stone, which indeed is nothing conducent to our purpoſe. Yet if you would thence make ſomewhat that is excellent, you muſt obſerve ſuch a Proceſs as this, here following. Put your gray ſublimate or Crows Head, which did aſcend (being firſt reduced to Powder) into a Glaſs Body, and upon it pour ſo much of my Tartar, as ſhall be needfull for mortifying the Oil of Vitriol, then lute an Head thereon, fitting a Receiver thereto, and ſubminiſter Fire in Sand, untill all the Humidity ſhall aſcend. This being done the Acidity remains with the Salt of Tartar, and the Spirit of Urine aſcends alone, carrying upwards with it ſelf the moſt pure inviſible *Mercury* of Antimony, which afterward by the help of *Sol* or *Luna* (as above we taught of *Mercury*) becomes fixed and viſible. But a very ſmall quantity of *Mercury* aſcends, which doth much diſpleaſe the unſatiable Slaves of *Avarice*; becauſe they rather take delight in immenſe Maſſes of Gold, equal in magnitude to the Head of an Ox. Yet no good man deſires that, but is content with that little, which God is pleaſed to give him. Nevertheleſs, if any one would have a great quantity of that, he may obtain the ſame. For the Subjects, whence it is extracted are preparable for no great charge, being ſuch, as enough of them may always be had. From one Pound of this mercurial Water, ſcarcely three or four Grains of corporal *Mercury* will aſcend. For the greateſt part of it remains in the bottom with the Sulphur and Salt, which are fixed apart, as hereafter ſhall be taught. But in that ſo little *Mercury* lies hid in the mercurial Water, other Philoſophers alſo knew, unanimouſly teaching, that *Avicen* is to be followed, admoniſhing (in a certain Epiſtle to his Son *Aboali*) all that he had need of 60 Pound of moſt pure mercurial Water. For if the whole Water were *Mercury*, there would not need have been ſo much. Philoſophers call this not *Aqua Vitæ*, but *Aqua Vitæ*; becauſe the *Mercury* in it is moſt ſpaciouſly diſſipated, as afterward (God willing) ſhall be diſcourſed more at large.

Now returning to our *Crows-head*, let us ſee whether it may be made white, by a lotion of a ſharp *Lixivium*. If you take the Glaſs out of the Sand, after you have once abſtracted thence the Mercurial Water, you will find your black Crow turned into a white Swan: for in the Glaſs you will find a Snow-like Salt, which if you take out, and put into another round Glaſs, or Philoſophick Egg, and ſet that into a Fixatory Furnace to be fixed, the white Colour in twenty fours hours waxeth yellow, and a little after puts on a Blood-like Colour. Yet it is not then ſo well fixed, as that it may be taken out, but muſt be ſuffered to ſtand for ſome time in burning Coals; yet with this Caution always, that the Fire be no ſtronger, than by which the Red Stone may be liquified, and remain liquid in, like Oil. For it will melt as eaſily as Wax, and neither the *Mercury*, nor the *Sulphur*, nor the *Salt* evaporate; which is that which affects the mind with admiration. I have made trial of this in a Glaſs with a long neck ſtanding out of the heat, where I could ſee not ſo much as one Grain to aſcend; whence I conclude the ſame Operation may be done, and ſuch Fixation made in an open Fire in a covered Crucible made of good and fit Earth well burnt. For the Salt of Tartar united with the Acidity of Vitriol, doth ſo embrace the whole *Mercury* and *Sulphur*, and as it were hold it concluded in it ſelf, that the ſame is compelled to abide in the Fire, and permit it ſelf to be ripened. Thus this volatile Salt to our *Mercury* is the *Luting* of *Sapience*, and *Seal* of *Hermes*, with which it is ſo bound, as it is conſtrained to abide in Fire untill 'tis fixed. After it ſhall be fixed, it may be uſed with admirable profit in Medicine and Chymiſtry. But you muſt rightly make trial, whether it be well fixed or no, thus: Put an Iron Wyar into the liquified Maſs, and with that take up a ſmall quantity for proof. Waſh away the Salt from it, and caſt the Red Powder upon a Silver Plate heat red hot: if it fume not, but enters and tingeth the Silver, not with a black, but with a yellow Colour, then the *Mercury*, with its *Sulphur*, is fixed. Whoſoever hath but once fixed this Stone, hath done a very great and profitable Work, although he hath ſpent many Weeks in preparing the ſame. For ſo ſoon as the *Mercurial Sulphur* of *Antimony* ſhall be fixed, ſome of it may preſently be applied to neceſſary uſe, and inſtead of that as much volatile and immature *Mercury* added; then the fixed *Mercury* willingly admits into it ſelf its Brother not fixed, that together with it ſelf it may alſo become fixed. Therefore as many Months as the firſt Fixation required for its perfection, in ſo many Weeks may the ſecond be abſolved. Alſo the ſecond Fixation being compleated, another part of the Medicine may again be taken out, and other not fixed *Mercury* again be put in, and ſo forwards to infinity, or as long as the Artiſt ſhall think fit.

Although this fixed Tincture of *Antimony* be an Univerſal Medicine, healing all curable Diſeaſes; yet for Metals it is onely a particular Tincture, by help of which you may indeed convert Silver, by graduating, and at times, into Gold; but yet at one time you cannot tinge the whole Body. For God hath not endowed it with ſo great power, yet he hath liberally beſtowed that on it which is worth while; inſomuch as we owe as great praiſes to God moſt high for the ſame, as they are obliged to render to him, who are partakers of the great Stone of Philoſophers.

As we have hitherto taught the way of Preparing a particular Tincture for Metals, and an Univerſal Medicine for humane Bodies of deſpicable Antimony; ſo alſo may a Tincture be made of *Auripigment*, immature *Mineral Electrum*, *Cinnabarine Sulphur*, and all other ſuch like, by the help of our Secret *Sal-Armoniack*. Wherefore, by this one onely Proceſs is ſufficiently explained, how from other like Subjects (where *Sulphur* and *Mercury* are conjoyned) ſuch a Medicine may alſo be prepared.

Whoſo-

Whoſoever well underſtands this way of fixing *Mercuries* preſcribed by me, will find more Secrets than he can ever think of, imagine or feign to himſelf. For ſince ſuch a Fixation may be performed in open Earthen Veſſels, you have not onely this conveniency, that as often as you pleaſe you may take out ſome of it, and make trial untill you come to a perfect Fixation; but alſo you have this prerogative, that your *Mercury*, with its *Sulphur*, is fixed with a flaming Fire, which always immediately toucheth our *Sulphur* and *Mercury*, and exalts the ſame in its own congenited Tincture, which is what a cloſe Fire cannot do. Every Fire, by its own nature and property, infers a Tincture in Mineral Subjects, eſpecially when the Flame can immediately touch the Subject neither cloſed nor open, as above you heard, where we treat of Rubefying the fixed white *Sulphur*. We diſcern the ſame in Crucibles made of white Earth, and ſet one within another, that the outmoſt, which is expoſed to the touch of the Flame becomes Red; but thoſe which ſtood within it (being free from the contact of the ſame) remain white.

Alſo we are not ignorant, that thoſe who make Tobacco-Pipes, (that they may have them purely white) do burn them in a large Pot, that they may not be touched by the Flame, and ſo be tinged with Redneſs. Whence it is ſufficiently underſtood, that even in Fire is a Tincture, by which white Bodies are tinged with Redneſs. Hence I, not without reaſon, ſay: He is not ill adviſed who ripens his Tinctures under a certain Covering in open Veſſels, becauſe they that way are not onely ſooner fixed, but alſo exalted in their Colour; yet with this Rule always obſerved, *viz.* That the Tinctures be always ſealed with *Hermes Seal*, or Philoſophically ſurrounded or luted with the *Luting* of *Sapience*. Where note, that the *Luting* of *Sapience*, of which I here treat, is not to be uſed for fixing all Subjects, and preſerving them from flight; but it is an emolument and help to thoſe Subjects onely, which are as well Sulphureous as Mercurial, and delight in the Communion of conſtringing themſelves by theſe Salts, and without departure conſtantly remain with them in Fire, and preſerve them alſo from flying away. That by ſuch a way, *viz.* by the benefit of *Hermes Seal*, Mineral Sulphurs may be fixed into Tinctures, ancient Philoſophers cloſely concealed as a principal *Arcanum*, and ſcarcely any of them hath ever made mention of an Artificial Fire, except that very ancient Philoſopher *Artephius*, who moſt excellently ſpeaks much after this manner: *Our Fire diſſolves all things, penetrates all things, deſtroys all things, participates of Sulphur, is equal, continual; yields no ſmoak, unleſs it be excited, for Matter it is taken from elſewhere*, &c Now accurately mind, whether here is not notified ſuch a Fire [as I ſpeak of] *Pontanus* in his Epiſtle ſaith, he travelled almoſt all the World over, that he might find ſome true Philoſopher, of whom by Converſe he might be taught ſomewhat of the *Secret of Secrets*: and that he met with ſome Philoſophers, but they were onely erroneous Vagabonds and great Impoſtors; alſo that at length (after he had erred an hundred times, although he wrought in and with a true Matter) he peruſed *Artephius*, and out of that Book learned the *Secret Fire*; which if he had not done, he had remained perpetually ignorant.

From all which it is ſufficiently clear, how much it concerns an Artiſt to have knowledge of the *Secret Fire*, *Luting* of *Sapience*, or *Hermes Seal*. Our Fire is indeed inſignized with three Names, yet it is no other than one Being, *viz. Oil of Vitriol, by the fixed Sulphur of Tartar, coagulated into the form of a Stone.*

But why I here ſo clearly deſcribe an *Arcanum* of ſo great Magnificence, and alſo publiſh the ſame, I have ſeveral weighty Reaſons. Yet, in the mean while, I am not at all ſolicitous or carefull thereabout, for fear it ſhould become too common, becauſe of an hundred Readers that read and peruſe the ſame, ſcarce one of them hating labour will give credit to the Preſcripts thereof; and ſome others (who loving labour would credit what is here written) yet perhaps will want the acuteneſs of a Philoſophick Ingeny, by the dexterity of which to inſtitute and abſolve ſuch a fixation. Wherefore I rejoycing in that, do confidently and ſecurely acquieſce, that the Art will not ſo eaſily be rendred familiar to every Son of the Earth promiſcuouſly without diſtinction; but Art will ſtill be and remain Art. Some years ago I did demonſtrate to the ſight of ſome of my intimate Friends the way of Preparing the *Mercury* of *Antimony*, and commended to them the Fixation of the ſame by our *Secret Fire*; but they unto this very day have never ſet their hand to the Work to elaborate it; and that perhaps becauſe it ſeemed to them to be too vile a thing, and not ſuch as was likely of that it could be prepared, a Medicine of ſo great Excellency.

Here in this Treatiſe I have taught the way of Preparing, by the help of Oil of Vitriol, a particular and famous *Salmiack*, by the benefit of which, from Metals and Minerals may be prepared, not onely an Univerſal Medicine healing all the Diſeaſes of Mortals, but alſo a particular Tincture for meliorating imperfect Metals. I have indeed ſpoken many things, but not all as yet; becauſe I there had no other intention, but onely to diſcover our *Secret Salmiack*. If I would proceed farther, I could certainly ſay, that in the moſt deſpicable Urine of Men a moſt pretious Treaſure lyes hid, although the greateſt part of the Poſſeſſors of it know nothing of the ſame; becauſe God, by reaſon of their Sins, will not impart this Secret to them. In the Urine of every Man is latent a certain living Metallick *Mercury*, which may thence moſt eaſily be extracted by the help of a certain pure Metallick Body, or by the aſſiſtance of Art be prepared into a Tincture, or Univerſal Medicine; according as we above taught, where we treated of *Mercury*.

Wherefore writing, I write and will write, that no Man in very deed can call himſelf poor, becauſe God hath conferred on every Man from his firſt Nativity ſo great a Gift, as being brought forth into the Light of this World, he may have ſufficient wherewith to live, provided he underſtands, and is able to perform what are to be performed. Philoſophers affirm, that *Adam* and *Eve* brought their *Stone* with them out of *Paradiſe*. But to us it is ſufficiently manifeſt, that they were caſt out naked, without all help and comfort. Therefore you infer they bore ſuch a Treaſure in their Bodies, as is ſeen by that of *Morienus*, who being asked by King *Calid*, In what Subject that famous Stone of Philoſophers lay hid? Anſwered; *In thee, O King, it is hidden.* And farther, ſo ſoon as he had prepared the Medicine, he writ about the Veſſel in which it was; *He that carries all things with him, needs not the help of another*: Signifying, that he needed not the help of any King, becauſe he had all things in himſelf. Having done this, he returned

returned to his Hermitage, and there bleſſedly paſſed the reſidue of his Life in the ſtudy of Temperance, Prayer and Faſting, always glorifying the Name of God. For if *Morienus* had not known that he had about him an ineſtimable Treaſure, without doubt he would not have left the King ſo ſecretly, but perhaps have waited in hope of ſome Magnificent Entertainment: yet he thirſted not after this, but going away acquieſced in that onely, which contained in himſelf, God had long before conferred on him when he entred this World. It is ſufficient for me that I have not buried my five Talents (lent me by God) in the Earth, but have reſtored them to my Lord, and have alſo ſo improved the ſame, as I have gained other five Talents.

Before I conclude, I am willing to ſay this: I have indeed received of God other five Talents alſo, but as yet have not gained five other Talents by the Uſury of them; and that not becauſe I fear the ſeverity of my Maſters Law againſt his idle Servants; but I fearing Evil from Men, durſt not make any Improvement thereof, becauſe I ſuſpect that thence a great and incurable abuſe would be ſpread far and nigh among the great number of wicked Men. Nevertheleſs, I now purpoſe to proceed in them, and that for certain Cauſes; and (with the aſſiſtance of God) as ſoon as I can to publiſh the *Magnalia* of the Almighty. Accordingly I hope this will prove a great comfort and preſent help to the whole Chriſtian Common-wealth againſt the *Turk*, the hereditary Enemy of the Chriſtian Name, [*vid. Proſper. Germ. p.* 5.] But the ſumme of things to be communicated, chiefly conſiſts in that, which certain artificial Inventions diſcover to me, by help of which many wonderfull things may be performed; and (if God ſo pleaſe) all the Neſts of thoſe Tyrannical *Hagarens* be laid waſte, and ſo the Chriſtian People be fully and plainly freed from their intollerable ſervitude. For if it ſhall be pleaſing and gratefull to the moſt wiſe God, that ſuch noble Inventions, hitherto unknown, may be divulged and put in practice; he alone hath power of procuring occaſions and means for making them publick: but if it diſpleaſe his glorious Wiſedom, in his Name the Art ſhall be buried with me, or rather be returned to Him, as to the Fountain of Fountains, from whence it flowed to me.

In the mean while, I could not chuſe but leave to Poſterity, for a Remembrance of my Benevolence, ſomething worth the minding, touching ſuch unheard-of, heroick, efficacious Inventions. But theſe are written as in a Parentheſis, and by the way. Proceeding, let us diſcourſe a little farther of deſpicable Urine.

All Men and Beaſts live of the Dungs of Animals; alſo no Corn, Wine, Apples, *&c.* would be produced, if not dunged with the Dungs of Animals. But ſome one may object and ſay, Wild Herbs, Trees, Shrubs and Reeds are not dunged with the Dungs of Animals, as Vineyards and Corn-fields. I anſwer. Thoſe Plants enjoy and have another Dunging, *viz.* Celeſtial or Rain-water, by the benefit of which in Autumn and Winter, Branches and Leaves falling off from the Trees, do putrefie, and become Dung; which kind of Dunging, in the Spring-time betakes it ſelf to the Roots of Trees, that a penetrative Dunging and procuration of increaſe may there be made, ſince the Leaves are to be eſteemed the Excrements of Trees, with which they are refreſhed and renewed. Why then may not the Excrements of Man ſerve for the Renovation of Man alſo?

No Man can deny, but that the Dungs of many Animals have been uſed in the Galenical Shops of Apothecaries, for the Compoſition of various Remedies, and are uſed at this very day. That in Urine is incited a ſingular comforting Virtue, they beſt of all can witneſs, who Shipwrackt in the Sea, have lived for certain days without Meat or Drink, and in the mean while have ſuſtained their life with the uſe of Urine onely.

Alſo, that Urine is an egregious Preſervative againſt the Peſtilence, the Maſters of Hoſpitals can witneſs this by all Men labouring with the Peſt.

Now if groſs Urine, with which ſo much impurity is mixt, be of ſo great efficacy, what may not its Spirit purified, and its volatile Salt effect, eſpecially, if before Diſtillation, the famous Eſſences of Vegetables be artificially added, becauſe ſuch Virtues of Herbs, Flowers and Seeds, Woods, *&c.* by the help of the volatile Salt of Urine, are excited through their whole Body, to exerciſe there their Virtues efficaciouſly.

Whoſoever knows how rightly to prepare, and duely to uſe Spirit of Urine, may eaſily thence get ample Riches, and reap no leſs profit in Medicine than in the Tranſmutation of Metals. Wherefore I here openly confeſs, that in this little Treatiſe I have poſited certain Proceſſes, which (as to their external face) ſeem to be of ſmall moment, yet to Men skilled in the Theory and Practice of them, they will find ſo gainfull a Work, as no Handicrafts-man whatſoever can gain ſo much by his Craft. So much gain may be hoped for from Urine onely, if rightly and knowingly handled according to the Spagyrick Art. Becauſe every one Man may gain not one, but ſeveral Imperials by that Art: the Proceſſes of which are diverſe, and that by the onely help of deſpicable Urine. Hence are thoſe frequent complaints of Ancient Philoſophers, that their Matter of the Stone is caſt away by Fools among Dung trod under foot and contemned, which notwithſtanding ought to be honoured by every Man. I ſay, by *Every Man*, becauſe from it the Philoſopher extracts his Univerſal Medicine, and the Phyſician his particular Remedies. For the Chymiſt tranſmutes vile Metals into better, and ſo conſequently every Mechanick Operator may expect ſome Fruit from the ſame. Wherefore Urine is not to be deſpiſed, but to be taken into uſe; inſomuch, as every drop of it that is ſpilt ſhould be bewailed. Yet I proteſt I would not diſcover this, but for the ſake of thoſe that have Ears to hear; becauſe other Men naturally deaf to ſuch things, can reap no profit by this my Doctrine, becauſe *Hippocrates* forbids to give Medicine to thoſe that are paſt hope.

Whatſoever are here related touching Urine, may be ſaid of the black ſhining Soot of Chimnies, of the Hairs and Horns of Animals, of Egg-ſhells, and the like, and eſpecially of the Fæces of Wine, which are caſt away after the Spirit is extracted.

But perhaps ſome Man may here ſay, Our Secret *Sal-Armoniack* is too coſtly to be uſed for the preſcribed Operation. To him I anſwer. No Man can gain ſomething for nothing. But whoſoever is deſirous to reap ſome Eminent Benefit, he muſt firſt ſow ſome pretious thing.

Indeed I confeſs, one pound of our *Salmiack* (if a Man onely follow the literal Senſe, or bare letter of

the Deſcription) will coſt ſeveral Imperials, becauſe for one pound of Oil of Vitriol prepared, four or ſix pound of Spirit of Urine are required for coagulating the Oil with the ſame, which notwithſtanding, in reſpect of thoſe famous things which are acquired by the benefit of it, it is not to be judged coſtly. If a Man cannot prepare his Spirit of Urine, and Oil of Vitriol himſelf, but muſt buy them of another, he then indeed may complain of Dearneſs. But to one perfectly well skilled, the *Sal-Armoniack* will coſt him little more than his manual Labour, inſomuch as no Man hath any juſt cauſe to complain of charges.

If the divine Grace ſhall be pleaſed to prorogue my Life a little longer, I purpoſe to publiſh greater *Arcanums*. Therefore let God do as he pleaſeth, his Will is always beſt, and better than the beſt Wills of all Men. *Amen.*

A Corollary.

Well-meaning Reader,

IN this ſmall Treatiſe I have in few words revealed great Secrets, ſuch as were known to no Man before me, except Paracelſus, *who very briefly ſpeaks of the chief of them. And* Heimont, *touching the great Virtues of that, hath writ many things. And ſince my* Sal-Armoniack *performs the ſame in all Operations, which* Helmont *aſcribes to his* Alcaheſt, *I am able to aſcribe ſomewhat more to my* Sal-Armoniack, *than he aſcribed to his* Alcaheſt, *yea, many things, which may profitably be performed by the benefit thereof, among which the chief is this,* viz. *that by help of it all Metals and Minerals may be reduced to their firſt Matter, that is, into a* Spiritual Mercury, *which is the higheſt Magiſtery in Chymiſtry.*

I, in this little Book, have onely preſcribed a few ways of preparing Medicaments, and that in a Laconick-Style, becauſe I writ theſe things in my Sick-bed. Indeed I could willingly and gladly forbear Writing, both now and heretofore; for by all that ever I writ, I never gained one half-peny. But Chriſtian Charity inflamed me to conſecrate this great Arcanum, *and the fruitfull uſe thereof, (before I dye, knowing in the Grave nothing can be done) and to publiſh the ſame for the good of Mankind remaining in the Earth; being full of great Hope, there will not want ſome Religious Spagyriſts conſcious of Piety, that will prove themſelves faithfull diſpoſers of this bequeathed Gift, and heal the Diſeaſes of the Poor* gratis. *But if the great troop of Malignant Spirits preſume to abuſe the Practicers of this moſt noble Art, they may find* Nemeſis *ready ſwiftly to puniſh them.*

Every one, as he pleaſeth, may prepare moſt preſent Medicaments. For all Herbs, the way is almoſt one. Alſo in reſpect of Animals, Minerals, Metals and Stones, you will find but little difference. Every Man may himſelf more profoundly ſearch into the Art. For my own part, I am at preſent ſo weak, as Strength faileth me to proceed farther in this diſcourſe. Therefore, by every good Man, I ſhall be readily excuſed, becauſe I have given ſufficient occaſion of ſearching into other high Secrets. If this my benevolent Communication ſuffice not any Man, he may himſelf ſearch farther elſewhere. For it is eaſier to add to things already found out, than to become the firſt Authour of new Inventions.

I had purpoſed in this little Book to ſignifie the moſt fruitfull uſe of my Secret Alcaliſate *Spirit of Wine; which is ſo great a Secret, as no Man before me did ever diſcover to the World; but my Sickneſs hath prevented and hindred the doing of that. If God prolong my Life, that may be done in another ſmall peculiar Book.*

Truly, I highly prize my ſecret Sal-Armoniack, *yet I more eſteem the uſe of my Spirit of Wine Alkalizate; that being a Spirit of ſo great potency, as from all Minerals, Metals and Stones, it extracts a moſt pure Tincture, and by Alembeck brings the ſame over the Helm with it ſelf. What ſhall I ſay? Even fixed Gold it ſelf cannot reſiſt it, but ſuffers it ſelf without a Corroſive (like ſweet Water coloured yellow with Saffron) to be drawn upwards. In a word, this Alkalizate Spirit of Wine is an admirable Inſtrument for a Phyſician, of it to prepare efficacious (yea incomparable) Medicaments; and he may eaſily acquire abundance of it, and that for no more charges, than after the common manner any other common Spirit is prepared. He that ſeeks ſhall find. Wherefore riſe from your ſoft Pillows, and with ſmutted Hands touch black Coals, and accurately give heed to the inſtitutions of Art. For with Idleneſs, Eating, Drinking, and playing on Muſick, you ſhall never approach to great Myſteries. I would have you always think of this that is now once ſpoken. It is indeed impoſſible for a moſt unskilfull Man to believe or comprehend, how great things may be prepared by help of this burning Spirit.*

About the end of the Preface of this Treatiſe, I mentioned ſome few things touching the ſame; viz. *that of good burning Spirit, with little labour and no great coſt, in a very eaſie way a true univerſal Medicine for humane and metallick Bodies might be made. This I would have no Man to doubt of, but to account of as moſt true. For I now ready to be laid in my Grave, have great need to be very carefull how I divulge any thing, unleſs ſuch pure verity as experience hath taught me. If the moſt wiſe God will prolong my Life untill the next Summer, and enable me to write out of Bed, my purpoſe is to publiſh ſome other new wonderfull Works; but if in the mean while I be taken away from the number of the living, then (candid Reader) kindly accept of theſe few things here written.*

This being thus imparted to all diligent Chymical Operators (whom I here ſalute and bid farewell) I wiſh a Divine Benediction in this Life, and Eternal Glorification hereafter. Amen.

Glory to GOD onely.

The End of the Seventh Part.

THE

THE FIRST APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

In which is contained, how many, yet greater, Secrets may be prepared by the *Alcaheſt*, or Secret *Sal-Armoniack*, than thoſe which are mentioned in the Seventh Part of the *Spagyrical Pharmacopœa*, viz. how Vulgar Mercury may be firmly fixed, and rendred totally conſtant in Fire, within the ſpace of three Days. Alſo an Explanation, how by the benefit of it may eaſily be acquired the Mercury of Wine, as the higheſt Medicine of the World. Likewiſe, that the Secret Fire of the Wiſe, otherwiſe called the Fire of *Artephius* is the ſupreme Secret of Secrets: Together with a Revelation of other admirable Secrets, of which the Authour hitherto hath made no mention to any Man.

To the Well-meaning READER.

I Could not forbear to ſignifie to the Lover of divine and admirable Works, the Reaſon of my former omiſſion or ſilence; namely, why in a little Treatiſe of mine lately publiſhed (which is intituled The Seventh Part of my Spagyrical Pharmacopœa *) in which I treat of my Secret* Sal-Armoniack *or Liquor* Alcaheſt, *I ſo ſuddenly broke off the Thread of my Writing begun, before I had any thing largely diſcourſed of the eminently excellent Vertues thereof, which it manifeſts not onely in Medicine, but alſo in Tranſmutation of Metals. Therefore, the Reaſon of my abrupt Ceſſation was as follows.*

Before I had compleatly finiſhed the afore-mentioned ſmall Treatiſe, I was aſſaulted with a grievous Diſeaſe, which incredibly prevailed more and more daily, inſomuch as I totally deſpaired of recovering my Health, and therefore thought it neceſſary, that whatſoever was then written (how imperfectly ſoever) ſhould for the ſake of the Poor and Diſeaſed be committed to the Preſs. But ſo ſoon as by the mercy of God, I was in ſome ſmall meaſure recovered, I peruſed that little Book, and preſently diſcerned, that the moſt powerfull faculties and virtues which that laudable Liquor is able to exerciſe and manifeſt both in Medicine and Chymiſtry, were ſcarcely in any-wiſe treated of, but almoſt wholly omitted in the ſame Book. Hence many conceited Men perſwade themſelves, that my Secret Sal-Armoniack *cannot be of ſo great Energy or Virtue, as* Helmont *aſcribes to his Liquor* Alcaheſt; *eſpecially becauſe He, in the Coagulation of* Mercury, *ſaith, that the ſame (when his Liquor* Alcaheſt *hath been but once abſtracted from it) is ſo fixed, as a pound of it being tried by Cupell, leaves behind, after Trial, fourteen Lotones of good Silver; which indeed is not to be eſteemed*

esteemed a vile Experiment, viz. *that by so very little Labour* (*as is one onely abstraction of the* Alcahest, *which may be done in a few hours*) *such a volatile, and that the sole Deluder of all* Alchymists *should be transmuted and nobilitated into a fixed Metal, tractable and perseveringly sustaining every Examen of Fire; and that by mediation of such a substance, as the Liquor* Alcahest, *which* per se *is no other than a volatile Salt. Nevertheless, it is found, that the same may be done, and that not onely common Mercury, by our Secret* Sal-Armoniack (*which otherwise rendreth all fixed Metals volatile, and separates the most pure Souls or Tinctures of them from their gross Bodies, and carries the same over the Helm with it self*) *is transmuted into Silver; but also the same is endued with a Faculty of transmuting other imperfect Metals into good and constant Gold. The Truth of which Assertion I have not gathered out of the Writings of other Authours, but have learned the same by the continual Industry and Experience of my proper Inquisition; and therefore am able so much the more confidently to assert somewhat my self, touching the same, to every ingenious Man.*

But that you may know the Reason why Volatile Mercury, by my Secret Sal-Armoniack *also volatile, is rendred fixed and constant in Fire; you are to understand, that this onely is effected by the cleansing power and virtue of our* Salmiack: *for in Vulgar Mercury is somewhat ingenited by Nature, which makes the whole Body of it volatile. Now if any one doth well understand how to separate that therefrom by an Artificial cleansing, the flying Mercury no longer remains volatile, but assumes to it self an hard fixed, tractable and Metallick Body; in which kind of Purification to be made, our* Salmiack *performs the office of a Master. Whence happens such a speedy fixation of Mercury; touching which we, in the following Praxis, shall more amply treat and demonstrate the same*, viz. *that so swift a Coagulation of volatile Mercury into Gold and Silver constant and abiding in Fire, is not to be accounted a vile work of small value, but to be esteemed as one of the principal* Arcanums *of Nature. This needs no proof, because by the sentence of all experienced Men it is long since notoriously known, that this noxious Deluder* Mercury, *by its volatility, hath deprived some thousands of unwary* Alchymists, *not onely of their Gold and Silver, but also of their Houses, Lands, Towns, Vineyards, Fields, Meadows, Gardens, and all their other Goods, carrying the same with it self up the Chimney, and leaving them nothing but an heap of broken Pots, Cucurbits, Glasses, Soot, Dust and Ashes, instead of the wealthy Spoils and rich Reward they thirsted after with vain hope. But as he hath evilly intreated the unskilfull and unwary Slaves and Drudges of Chymistry, so he hath dealt well with experienced and wary Philosophers, who (after they had observed his Inconstancy, and learned to amend the same) were such as he was constrained to obey, insomuch as they could subdue, bind and fix him. This is no Fiction or fabulous Tale, but a Truth which may be proved by many hundred true Histories, declaring, that in various parts of the World have lived those who were able to fix Mercury into a constant permanency.*

Of the more ample Use of our Salmiack.

HAving in the precedent Treatise omitted the best and most worthy use of our *Salmiack*, (*viz.* that by the benefit of it *Mercury* might be so purified, as to be very easily fixed into a Red Body fixt and constant in Fire) I was incited and moved thereby to commit this *Appendix* to the Press; especially because in doing the same, I could also upon every opportune occasion notifie several other profitable Secrets, which may be perfected by help of that; as here following you shall perceive, they being inserted one after another.

Therefore incline your Ear to hear what admirable Effects our *Salmiack* is able to manifest both in Medicine and Alchymy.

First, Our Secret *Salmiack* not onely purifies Metals, and separates the pure part from the unprofitable gross Bodies of them, but the Volatile parts it carries upward with it self; and afterward suffers it self to be again fixed [with them] into fixed Tinctures, as already in the precedent Seventh Part of our *Spagyrical Pharmacopœa*, we have very sufficiently proved, as well as in our Treatise of the *Three Principles of Metals*; but also it is endued with a power of carrying over the Helm the most fixed Gold, without any Corrosive, like to a yellow sweet Spirit, and of converting the same into true *Aurum Potabile*: for such *Aurum Potabile*, without a Corrosive adhering is found to be, not onely an efficacious, sweet and famous Medicine for humane Bodies, but also a true Tincture for transmuting imperfect Metals into better.

It is indeed a very great Question how such Gold can be a Tincture for other more vile Metals, since common Gold (according to the Opinion of many Philosophers, and the experienced truth of the matter) *per se* contains in it self no more Tincture than is sufficient for it self, and without prejudice to its own virtue or nobility is able to communicate no good to other Metals. Nevertheless, Philosophers more acute, narrowly sifting the matter, have found that vulgar Gold, by the assistance of Art, may be destroyed, and its inside turned outward, but its outside inward: for such destruction Philosophers have called *Exaltation*, intimating, that the Exaltation or Melioration of Gold must be made in the Sign *Aries*; to which assertion I could never assent, but always believed and urged the contrary, inveighing earnestly against *Toletanus*, who writ *Animadversions* upon that good Philosopher of ancient Repute *Bracescus*, as if he had been a dull and obstinate Man, teaching in his Treatise of the *Tree of Life*, that the Universal Medicine might be prepared of vulgar *Mars*; for it not a little troubled me (after by a previous and

and continued ſtudy of reading and peruſing the beſt Authours, I at length by the Grace of God, in my ſearch found and learned the way of making ſuch a Tincture and Medicine) that the ſaid *Toletanus* did ſo unhandſomely heighten his Style againſt the laudable *Braceſcus*, and contemned the famous Induſtry of that man, inſomcuh as I have, in ſome of my Writings (although with a certain Zeal, which I ingeniouſly confeſs was unſeaſonable) chaſtized this *Zoilus*, becauſe he with an impertinent Preſumption did ſo raſhly and arrogantly attempt to oppoſe and contradict that, which he himſelf had not ſufficient Experience of. But it happened, that afterward ſuch an Exaltation of Gold fell into my hand unexpectedly. Whence, ſeeing ſuch an Exaltation of Gold to be true, I repented my own folly. VVherefore now I openly confeſs, that by the help of our ſecret *Salmiack* I have very often elaborated ſuch an Exaltation of Gold in the mineral Aries; although in a very ſmall Quantity, finding that to be ſufficiently imbibed with the Colour of Gold, whenſoever onely two or three Grains of ſuch exalted Gold were mixed with a whole Pound of common VVater. But in metallick Tranſmutation, during theſe days of my indiſpoſedneſs, I could never yet try any thing further. If the moſt wiſe God, ſhall be pleaſed to reſtore and raiſe me out of my ſick Bed (as I hope this next Summer he will) I will not omit to try what the aforeſaid exalted Gold is able to effect in the Tranſmutation of Metals. In the mean while I am perſwaded, that it will prove an amply potent Tincture for *Mercury* and *Luna*, and thence I divine becauſe two or three Grains of ſuch exalted Gold do tinge a whole Pound of VVater with a golden Colour that the ſame muſt be done with *Mercury* and *Luna*. Therefore no man hath cauſe further to doubt, that common Gold, by the help of our *Salmiack* in Aries, may be reduced into ſome one true and fixed Tincture; as here following (God willing) ſhall be ſhewed more at large.

Of the more largely fruitfull uſe of our Sal Armoniack *in Medicine and Alchymy.*

MY Preface to the ſeventh Book of my *Spagyrical Pharmacopœa*, mentioneth how the *Mercury* of Wine may be ſeparated from any pure burning Spirit, and perform the Office of an univerſal Medicine healing men and metals. But ſince in ſuch a manner of preparing the Medicine as I there preſcribed, very little *Mercury* of Wine will be gotten, not enough to ſatisfie thoſe, that deſire more abundance, becauſe from one Pound of Spirit of Wine, ſcarcely three, four or five Grains of moſt pure Cœleſtial Salt are extracted; which nevertheleſs is not to be eſteemed ſo exceeding ſmall a quantity, if any one ſhall with a more accurate ſearch of his mind well weigh the incredible medicinal Vertues thereof, which it manifeſts and exerciſeth againſt humane and metallick Diſeaſes; inſomuch as (in either Faculty) in the whole nature of things you ſhall find no Medicament like unto it. Certainly it is a true Cœleſtial Medicine, in the form of a certain white ſweet Salt, for if one onely Grain of it be taken into the Body of a Man diſeaſed, he will thereby be notably comforted in all his Members, and amend and find himſelf better in a moment. I muſt needs confeſs, that I have not long ſince found out the Preparation of the ſame (during the long continuance of my Diſeaſe) by various Speculations; and when by reaſon of my Sickneſs I could not riſe out of my Bed to prepare this noble Medicine my ſelf, I committed the ſame to the hands of my faithfull and truſty Friends to be by them prepared, but in a very ſmall quantity: For I cauſed not above two or three Pound of Spirit of Wine to be burned, and thence could not acquire much *Mercury*; nevertheleſs I found ſo much therein, as ſufficiently to content and ſatisfie my mind as well in Medicine as in Alchymy; believing, as I have above mentioned, that no Medicine more excellent than this can be found in the whole nature of things. Moreover, every one may conſider with himſelf, how great Salubrity ſuch a Cœleſtial Medicine may beſtow and confer on the ſick Bodies of Men, as often as he accurately weighs with himſelf the Subject (*viz.* Wine) of which this Medicine is prepared. For it is known through all parts of the World far and nigh, that under the Sun is not given a more excellent Cordial Subject, than good and pure Wine; although that abound with many inefficacious Humidities, and other Tartarous Feculencies, whereas on the contrary the *Mercury* thereof is moſt pure, or a ſweet Cœleſtial Salt is extracted from good Spirit of Wine deduced to the higheſt purity. But ſome one may ſay, what Spirit of Wine? If in that ſuch a noble *Mercury* be latent, and the ſame as it is in it ſelf be given for comforting the Sick, what need is there, that it being kindled ſhould be burnt; and why may not (without that labour and charge) its volatile Salt be received in a Refrigeratory? In anſwer hereunto let him know, that Spirit of Wine is almoſt all a mere Sulphur, and therefore is eaſily inflamed and devoured with the Flame, as is common to every Sulphur, *viz.* that ſo ſoon as it is ſet on Fire, it conſumes it ſelf, and leaves behind it no other than Aſhes and a fixed Salt; but the *Mercury* which adhered to the Sulphur, is diſſipated in the Air with the Flame, unleſs it be taken in a Cold Receptory, in which it may cool and condenſe it ſelf. Indeed we for certain know, that no one of all the three Principles of Vegetables, Animals and Minerals is totally pure, but it always inviſibly bears about it ſelf ſome ſmall part of the other two Principles, as may beſt of all be ſeen in combuſtible Entities, ſuch are Wood and other Vegetables; for they being kindled and ſet on fire, the Sulphur is onely burnt, but the other two parts, *viz.* the fixed Salt, and the volatile *Mercury* remain free from Combuſtion. As for Example, if you burn Wood, an Herb, or any other kind of Vegetable, the Sulphur onely periſheth, but the *Mercury* adheres to the ſides and walls of the Chimny. If you thence ſeparate the Aſhes and other Filths, which fly together upwards, you will obtain a white volatile Salt, altogether like the Animal volatile Salt of Urine, except in this onely, that this volatile Salt ſavours of Aduſtion. The fixed Salt is extracted out of the Aſhes by Elixiviation of common Water. Moreover Animal Entities being burnt, *viz.* the Bones of any Animals; the Sulphur is onely burnt, but the volatile Salt flies away, and almoſt no fixed Salt remains in the Aſhes. Laſtly, common mineral Sulphur being burnt, almoſt all the Sulphur vaniſheth into Air like a Flame, and together with the Flame an unburnable *Mercury* aſcends, in form of an heavy Corroſive Oil, which by Chymiſts is vulgarly called Oil of Sulphur, and is received in Glaſs Campanes; nevertheleſs that Oil is by Philoſophers named the *Mercury* of Philoſophers, becauſe ſuch Oil is eaſily tranſmuted into a

ſweet Fuſile Stone, of which my lately publiſhed Treatiſe of the Salt of Philoſophers makes ſome mention. From all which you may clearly gather, that there is no Sulphur found ſo pure, but that it is impregnated with ſome ſmall part of Salt and *Mercury*; alſo you can find no *Mercury*, in which is not incited ſome part of Salt and Sulphur; and in like manner no Salt, to which a little Sulphur and *Mercury* adheres not. Which being thus, why may there not latently be in Spirit of Wine an incombuſtible Salt and *Mercury*? And as Spirit of Wine duely rectified according to the Precepts of Art, is found to be the pureſt of all other Sulphurs, and endued with no Feculencies; ſo alſo neceſſarily, when that Sulphur is kindled and burnt, with the Flame muſt needs aſcend as it were an unburnable Subſtance, which may be received in a Refrigeratory for amending humane and metallick Bodies. Whoſoever cannot comprehend and believe theſe, he truely and condignly may be called a Blockhead, although by his Flatterers (men very indiſcrete) he be accounted even the Eighth of the Wiſe wen, or a ſecond *Paracelſus*.

I purpoſed in my mind to communicate this ſupream Medicine to ſome candid Friends, that ſome preſent Medicine may thence be made, by the ſalutary help of which, I alſo in this my declining Age, and in the Diuturnity of my Diſeaſe, may be made partaker of ſome Relief, ſince I my ſelf now ſick in Bed, am able to prepare nothing.

Indeed I did formerly reveal this ſo very great Myſtery to ſome of my old Friends, and that to the end that they being ſound and in health might labour therein, and after their Work was ended (which might be compleated in Eight days) communicate to me, as an Offering of thanks, ſome ſmall part of that Medicine, that my old infirm Body might be comforted; but their intent was far otherwiſe: For theſe rude men would not ſuffer me to participate of one Grain of the Medicine revealed, nor ever came within my Doors ſo much as once, after they were fully and plainly inſtructed in the Art by me taught; but paſſed by as if I had been a man wholly unknown and never ſeen by them. But this was to me a very juſt and truely deſerved Recompence, becauſe I being too credulous, did ſo vilely caſt into the Mire the moſt noble Pearl of all Medicine, not conſidering the faithfull admonition of the ſupream Maſter: Beware of Men.

I muſt needs confeſs that it is not a Work for covetous men; becauſe ſuch thirſt after nothing elſe, but a great Maſs of Gold, and think this moſt noble Art to be no other than a rotten Thread. In like manner I do alſo confeſs, that common Spirit of Wine gives forth from it ſelf but a very ſmall quantity of ſuch Cœleſtial Salt; yet a great quantity of the ſame no man hath need of, becauſe the power and efficacy thereof ſhews it ſelf far and nigh. If any one be deſirous to acquire to himſelf a greater quantity of this our Cœleſtial *Mercury*, he may obtain his deſire, if he make uſe of a good medicinal Reſtorative Subject, as Sulphur or Antimony fixed to a Redneſs, alſo Gold, Pearls, red Corals, caſt Skins of Serpents, *Boletus* or *Fungus Cervinus*. If theſe and the like reſtoring or renovating things be extracted with Spirit of Wine and the ſame Wine burnt: becauſe in doing that, with the Flame will aſcend a moſt pure mercurial Salt, which muſt be received in a cold Recipient.

In like manner all Metals, when they are duely extracted with Spirit of Wine, do in burning give forth from themſelves a volatile mercurial Salt, which may profitably be adminiſtred, as well in Medicine as in Chymiſtry. For the Salt of *Saturn* is a moſt preſent Peſtilential Remedy; the Salt of *Venus* an efficacious Venereal Medicament, the Salt of *Luna*, a moſt excellent Cephalick, the Salt of Gold a famous Cordial, and the Salt of *Mars* an admirable Stomach Remedy, and a true Tincture, by the help of which vulgar *Mercury* and *Luna* may be tinged into Gold. But it cannot profitably be adhibited in metallick Labours, unleſs it be firſt reduced to a red Fixedneſs by the benefit of common Gold, being ſuch, as after the firſt Preparation may be very eaſily fixed and rubified; although it all aſcends in a white Flame, and the Preparation be from a red Subject. For it is fixed and waxeth red, if any one do from it but once abſtract the Water of *Saltaberis*, as *Paracelſus* calls it. But if you ask what *Paracelſus* his Water of *Saltaberis* is, it is not my purpoſe at this time to publiſh and divulge that kind of Water. *Helmont* vaſtly erred, when he thought it to be the Water of Whites of Eggs, which it is not, but it is a Water preparable for a very ſmall Price, as much as is ſufficient.

In the mean while, no unskilfull Man is able to believe, with how great a property of purging, elevating and fixing the Flame of good Spirit of Wine is endued. Therefore, whoſoever is deſirous of knowing this, by putting his hand to the Work let him make Trial. The Flame of this burning Spirit renders all corroſive and bitter metallick Subjects ſweet and pleaſant; therefore *Lully* rightly ſaid: *The immature Bitterneſs is to be dulcified, that the whole Magiſtery may be obtained.* Briefly I ſay, by the benefit thereof, ſo great good may be performed as is difficult to be believed, unleſs any one before he ſets about the Work hath beheld the Event. In which at preſent we acquieſce, yet out of an abundance ſhewing this, *viz.* that, whenſoever any man hath a mind to ſubtilize metallick Subjects by a burning Spirit (diſtilling or ſubliming them into ſweet Salts or Tinctures) he is obliged by no neceſſity at all, to uſe no other than Spirit of VVine onely; becauſe a burning Spirit of Corn, or extracted out of other Vegetables, will do the ſame. But whoſoever would without Metals acquire a ſweet medicinal *Mercury per ſe*, he muſt prepare that of the Spirit of ſweet VVine; becauſe other Vegetables afford not ſo much mercurial Salt as may be had from Wine; which is to be kept in mind as a thing worthy of Obſervation.

Thus have I here clearly revealed as high a Medicine as ever was or can be found in the Nature of things; which no one of the Philoſophers before me did ever preſume to do. Indeed *Albertus Magnus*, and his Diſciple *Thomas Aquinas* have written of it ſomewhat more clearly than others, yet ſo, as few Readers can follow the mind of them. For they do indeed make mention of Spirit of VVine, yet the Inſtrument under which it is to be burned, they did not in any wiſe expreſs, or hint at. *Baſilius* taught that the Inſtrument was to be made of Copper; yet this kind of Inſtrument is not every way conducible, but there is ſome defect in it. As for my ſelf, I long ſought with earneſtneſs, before I could find a fit Inſtrument, in which I might receive this Cœleſtial Salt and *Mercury*. Let others after me alſo make the like ſearch, till they find. It is not my buſineſs at all times, to caſt all things at the Feet of the unworthy. For I am forbid by the Fates, having already

divulged

divulged more than enough. But whoſoever is deſirous of learning more touching this kind of labour, let him peruſe *Braceſcus* in his Treatiſe of the Tree of Life, touching our mercurial Water, where he may find things enough worthy of note to yield him content. *Avicen* indeed writes alſo excellently, but very briefly. *Coſmopolita* and *Neuſementius* have writ ſomewhat more clearly in their Books, yet with ſo Philoſophick a Character, as ſcarcely one among a thouſand Readers ſhall there find what he ſeeks. More at this time touching this it is not lawfull for me to diſcourſe; but of other things here to be treated of, let every one comment and meditate what he thinks good.

Of the further uſe of our Salmiack.

IN my lately publiſhed Treatiſe of the three Principles of Metals, I ſhewed how by the help of *Proſerpina* the Wife of *Pluto*, a tinging Oil of a ſanguineous Colour might be diſtilled from the Vitriol of *Mars*, and thence be coagulated into a ſweet Fuſile Stone, by the benefit of which great things may be effected in the Tranſmutation of Metals and Gems. But what is underſtood by *Proſerpina* I conſiderately concealed from the Reader, as well as the Coagulation of the red and white corroſive Oil of Vitriol into a ſweet Stone, becauſe at that time I purpoſed not to publiſh any thing more thereabout. After that Publication, certain Rivals of our Art came to me very earneſtly intreating, that I would alſo reveal to them *Proſerpina* and my Coagulation of Vitriol: Theſe men by their perſwaſive Intreaties ſo ſoftned my mind, as I was freely willing to gratifie them, but with this Condition, *viz.* that ſo ſoon as they had elaborated the whole Work, they ſhould impart to me ſome ſmall Portion of that Medicine, yet this promiſe of a thankfull acknowledgment hath not untill this day been fulfilled, wherefore I on the other hand fearing that ſo great a Secret (*viz.* how by the help of *Proſerpina* the tinging Oil of Vitriol of a ſanguineous Colour, tinging *Luna* into Gold, might afterward be coagulated into a Fuſile Stone) ſhould be expoſed to publick view by thoſe, that were ſo ungratefull to me, was reſolved I would my ſelf be the Publiſher of ſo great an *Arcanum*, knowing always, that the Maſter is better able to diſcourſe of his own Work, than the Diſciple; not in the leaſt doubting, but that by this Revelation or way of diſcovery, many Alchymiſts, reduced almoſt to the extream neceſſity of *Irus*, and ready to periſh, will be able to recover themſelves, and obtain their priſtine repute among men. Therefore touching the Diſcovery of this *Arcanum* thus take it.

By *Proſerpina* in the afore mentioned Treatiſe is underſtood the corroſive Oil of Antimony, or in defect of that Butter of Antimony, which (when added to Vitriol of *Mars* in like Proportion, and diſtilled by Retort) carries over with it ſelf the Gold of Philoſophers or Tincture of *Mars*, in form of a thick Oil of a ſanguine Redneſs; which red Oil, when coagulated into a ſweet Fuſile Stone, will be very available in the Emendation of Metals, eſpecially in tinging *Luna* into good Gold, as a little after you ſhall hear. Theſe are briefly ſpoken touching the Antimonial *Proſerpina*: Here following it ſhall be ſhewed by us, how our Secret *Sal Armoniack* may profitably be uſed inſtead of the Antimonial *Proſerpina*, after we have premiſed the way of coagulating the red Oil of Vitriol into a Stone not corroſive, by help of which Metals may be amended variouſly. As to the Coagulation of the red and white Oil of Vitriol, and alſo of other corroſive Liquors, that indeed is very eaſie to accompliſh, but hard to find out. For all Philoſophers have very obſcurely writ of this kind of operating, in ſuch a Laconick manner: Diſſolve and Coagulate. The Solution of *Mars* into Vitriol is made by the help of common Oil of Vitriol, or elſe by Spirit of Salt. But the Coagulation into a tinging Stone not corroſive is made by the help of old, cold and dry *Saturn*, becauſe he it is, that underſtands how with his own moſt intent Coldneſs and Dryneſs to extinguiſh all humid coldiſh Fires, and to change them into hard Stones.

No one of the Philoſophers hath writ more clearly touching the Coagulation of mineral Spirits, than *Paracelſus*, in that Treatiſe which is intituled the Heaven of Philoſophers, being that in which he treats of the Nature and Properties of the ſeven Metals, and in the Fifth Chapter of *Saturn*, he thus ſpeaks.

Canon the Fifth, touching the Nature and Properties of Saturn.

SATURN of his own proper Nature thus ſpeaketh.

The ſix other Metals have caſt me out for their Examinator, and have thruſt me from themſelves out of the Spiritual Place: They have given into my Manſion a corruptible Body, that I might be what they neither are nor deſire to have. My ſix Brethren are ſpiritual, thence it is, that they penetrate my Body as often as I am burned in the Fire; and together with me they periſh in Fire. Sol *and* Luna *onely excepted, which are cleanſed with my Water and wax proud. My Spirit is a Water ſoftning the rigid and congealed Bodies of my Brethren. Yet my Body tends to the Earth; whatſoever is received into me, becomes alſo conformable to us, and by us is converted into one Body. It would not be profitable for the World, if it ſhould know or could believe what are latent in me, and what I am able to effect. It would be more profitable for the World if it underſtood that, with me, which I am able to do: Then leaving all Arts of Alchymiſts, it would uſe this onely, which in me is, and by me can be done. The Coldneſs of a Stone is in me; this is the Water, by which I cauſe the Spirits of the ſix Metals to be congealed into one corporeal Being of the ſeventh, that is, to augment* Sol *with* Luna.

Theſe I have tranſcribed word for word out of *Paracelſus*, that by them it might be ſufficiently maniſeſt, that he knew how to perform the Coagulation of ſharp mineral Spirits by cold and dry *Saturn*, becauſe touching that he ſo evidently writes, as he that writes moſt plainly cannot deſcribe the ſame more clearly, although there have been very few men, who did rightly underſtand this Prince of Philoſophers, and could by his words learn the Coagulation of ſharp mineral Spirits there touched, although in a particular Tranſmutation of Metals no method more eaſie can be given than by our Salt of Philoſophers, which from red Oil of Vitriol is coagulated by cold *Saturn*. I will not paſs over in ſilence, what Fruit may otherwiſe be reaped by the Benefit of this in the Emendation of ignoble and very pretious Stones; becauſe by that kind of labour more profit may be gained by ten Fold, than in the Graduation of Metals into *Sol* and *Luna*; for our red Stone exalts all Gems in their Colours, and tingeth white Cryſtals into all kind of Colours; in which Work, there

there is not any of the Off-ſprings of the Earth able to do the like. Wherefore the Ancient Philoſophers more eſteemed this Coloration of Stones, than the Art of tinging Silver into Gold; For ſuch a Stone not onely amends Metals, but alſo graduates ſmall Stones noble and ignoble, and tingeth them into better ſhapes and colours. For more excellency and good lies hid in deſpicable Lead, than any unskilfull man is able to imagine or can perſwade himſelf to believe; becauſe the Inſide of it is no other than mere Gold, inſomuch as Philoſophers have called it Leprous Gold.

So ſoon as this impure Gold ſhall be impregnated with the Antimonial Oil of Vitriol, and both conjunctively coagulated together into a red Stone, thence muſt neceſſarily be made a Tincture for Metals, as well as for Stones. Much more ſhould here be ſpoken touching our coagulated red Oil of Vitriol: But to what purpoſe is it to bring a ſample of beautifull Colours before the Eyes of a blind man, being ſuch as he cannot ſee, nor is able to judge any thing of. [See this Proceſs plain in *Proſerpina.*]

In the ſeventh Part of the Proſperity of *Germany*, mention is made of a like Coagulation of ſharp Spirits, wherefore I would refer every ſtudious Lover of curious Arts to the peruſal of that part. For what are here briefly treated of, are there more copiouſly handled, as every Reader may find, and apply to his proper Benefit. Time now admits not a more ample Diſcourſe in this place, touching ſuch ſharp Spirits of Salt.

A Furthur Uſe of our Salmiack.

FIrſt, vulgar *Mercury*, by the help of our Secret *Salmiack*, may be ſo purified in the ſpace of one Day, as the day following by one onely abſtraction of the Water of *Saltaberis*, it may be coagulated into a red fixed Medicine. Which ſwift Mortification, Coagulation or Fixation, was highly eſteemed by *Paracelſus* and *Helmont*. This *Mercury*, *Paracelſus* inſignized with the Title of *Coralline Mercury*, and celebrated the ſame with this illuſtrious Praiſe, *viz.* that in the whole Nature of things, there was not any Remedy more excellent for yielding relief in the Gout and French Diſeaſe; adding, that it recreates the mind of the Artiſt, becauſe it hath entrance into Gold, and with the ſame is converted into Gold, and ſo not a few impoveriſhed Alchymiſts may again be ſtored with Riches. But ſince the Death of this Philoſopher, you ſhall not find that there hath been one or other of the Profeſſours of Chymiſtry unto this day, who could prepare ſuch a red fixed *Mercury*; the Reaſon hereof is, becauſe none of the Sons of Art could comprehend the Water of *Saltaberis*, by which *Mercury* is to be brought to a fixed Redneſs, none I ſay, untill *Helmont*, that moſt learned Philoſopher of our Age diſcovered himſelf, witneſſing that he alſo could prepare ſuch *Mercury*, which he inſignized with the Name of Horizontal Gold, affirming it would ſufficiently ſupply whatſoever the Phyſician and Chyrurgeon ſhould need.

In like manner, that moſt expert Philoſopher *Nuyſementius* did write of ſuch a *Mercury*, teſtifying, that two or three Grains of it onely being taken in ſome Confortative, would purge out all Impurities from the humane Body. Indeed *Helmont* expreſſeth this in other words, yet by them intimates, that it purgeth out all Filths from the Veins. Behold three famous men, ſerving inſtead of the *Marpeſian* Columns of all Hermetick Philoſophy and Medicine; for they have excellently writ of this *Mercury*; yet to the Inventions of theſe, none of their Succeſſours have added any thing, but have been ſtill and quiet, ſhunning the labour of preparing an Univerſal Medicine. During the eight Months I was detained in my ſick Bed, by reaſon of my Infirmity, occaſion was offered me of a more ſerious Meditation of ſuch abſtruſe things, inſomuch as I at length found the Water of *Saltaberis*, by the help of which I totally fixed *Mercury*, not indeed as *Helmont* ſaith into conſtant good Silver, but into very good Gold. Whoſoever is ſeized with a deſire of ſuccouring the miſery of the ſick, he will do better for publick good, in uſing ſuch a fixed *Mercury* rather for expelling the Cruelty of a Tyrannical Gout, and the French Diſeaſe, than for Gold making, unleſs ſo far as he hath need to uſe the ſame for neceſſary Aliments.

Whoſoever deſires to know more of this Coralline *Mercury*, or (according to *Helmont*) Horizontal Gold; let him peruſe our little Treatiſe intituled the Seventh Part of the Spagyrical Pharmacopœa, where he may find not onely many *Mercurys*, which are not inferiour to this, but in many things excel it. Alſo there you are taught how a burning Spirit may be diſtilled from all Vegetables, and with ſuch a Spirit, by kindling and burning it, the *Mercury* of Wine be ſeparated from the Sulphur in flame, and that as a pure Cœleſtial Salt be gathered in a fit Recipient, and adminiſtred againſt all Diſeaſes, as a ſupream Univerſal Medicine. Alſo there is taught the way of purifying *Mercury*, and depriving the ſame of every loathſome Taſte and Odour, in ſuch wiſe, as it is rendred ſweet and pleaſant, like to Fire conſuming Diſeaſes, and for correcting every Cachexy of the whole Body. In like manner the ſame teacheth the way of preparing *Mercury* ſo, as it offers it ſelf to be ripened by the Secret Fire of *Atrephius* into the higheſt Medicine, and that in a ſhort time with little labour and charge.

Hitherto I have variouſly treated of the manifold Uſe of our Alcaheſt; but ſince this kind of Doctrine may profit Junior Phyſicians, Apothecaries, Chymiſts, and other learned men more than Mechanick Artificers; I purpoſe here to ſubjoin ſome other Secrets alſo, which may be of uſe to the People, that ſo our *Alcaheſt* may become *Oneſimus* the common Servant of many, and in this manner be verified what in the ſuperior or precedent Treatiſe is mentioned, *viz.* that of deſpicable Urine all men of all Orders, when they will may reap profit, and ſufficient Aliments. But, although Spirit of Urine alone, without the help of Oil of Vitriol, or ſome other Acid Spirit, cannot effect all that is to be performed, yet the labour of making Oil of Viriol is not to be eſchewed, ſince it is that which may be prepared in abundance with little charge, and almoſt no trouble. If any one be but a little more skilfull, than a common Chymiſt, then indeed he may prepare at leaſt four pound for the charge of one Imperial. If you cannot perform this work, Oil of Sulphur offers it ſelf, which is more conducible for preparation of the Liquor *Alcaheſt*, than Oil of Vitriol, and in a peculiar Furnace, of an hundred pounds of Sulphur, without any great trouble, you may eaſily prepare ten or twelve pounds of Oil, and that for a ſmall charge.

Wherefore, whoſoever would by the benefit of the *Alcaheſt* elaborate any thing to profit, he muſt firſt be provided of, and furniſhed with Spirit of Urine, and that ſome quantity, and alſo not a little Oil of Vitriol

Vitriol or Sulphur, ready for future uſe, that without any delay or hindrance he may happily proceed in his work begun, which without theſe he cannot abſolve. If Spirit of Urine and Oil of Vitriol be to be bought by any one, his *Alcaheſt* will be too dear, of it to prepare much to profit, as by the following ſhall appear.

What is that which *Pontanus* ſaith to this? The whole body of Mercury, without any previous Separation of the pure from the impure, may by the help of the Secret Fire of *Artephius* be totally ripened into a fixed Medicine or Tincture, without any diminution of its weight. Touching which wonderfull fixation, I in my Sick-bed made a ſmall trial, inſomuch as now I am obliged to believe what *Pontanus* affirmed touching ſuch a Secret Fire; openly confeſſing, that the ſame Secret Fire is more to be eſteemed in Medicine and Alchymy, than all other great Secrets, which have ever been obſerved by Philoſophers. Wherefore now, nothing grieves me ſo much, as that by reaſon of my great indiſpoſedneſs, being always conſtrained to keep my Bed, I am able to make no further trial of the ſame.

This Fire converts all venomous Subjects into ſalutiferous Medicaments; fixeth all things that are volatile; renders all ſharp and bitter things ſweet and pleaſant. In a word, this Secret Fire cannot more properly be compared to any thing, than to *Titan* or the *Sun*, whence all things draw their Life and Increaſe. For that Fire, firſt of Earth, Water and Air, produceth groſs, bitter and harſh Fruits, then ripens them being unripe, and changeth them into ſweet and pleaſant Fruits, imitating the *Sun* producing ſower Grapes, which it ſweetens after its various Operations upon them. The ſame may be ſpoken of the maturation of vulgar *Mercury*, being ſuch as *per ſe* (whilſt it is as yet volatile) is to be eſteemed an immature and bitter Fruit: but as ſoon as by our Secret Fire its Bitterneſs and noxious Venome ſhall be taken away, and it becomes fixed and able to abide the Examen of Fire, it is no longer a bitter Venome, but paſſeth into a ſalutiferous Medicament. Hence the worthy *Lully* cried out; *If you dulcifie the bitter, you will have the whole Magiſtery.* Which Dulcification our Secret Fire is able to compleat as perfectly as the *Sun* of all acid and harſh products of Trees, makes ſweet, pleaſant and ſalubrious Fruits. *Pontanus* witneſſeth, that he had laboured in the true matter of the Stone, yet that he erred more than an hundred times, and that he ſhould never have returned into the Royal way of Infallible Operation, if he had not read *Artephius*, and of him learned the Fire of the Wiſe. This indeed is a thing to be admired, that almoſt no Chymiſt imploys his Care, Study, Meditation and Counſel to ſeek out and find our Secret Fire, although to it there is ſcarcely given another like and ſecond in all the things of Nature. *Artephius* did ſo clearly deſcribe that Fire, as you would wonder that ſo few Searchers have ever comprehended his Mind. All other Philoſophers, who were partakers of ſuch a Fire, do with *Artephius* expreſly write, that it burns continually in their Glaſs, and not ſo extrinſecally, in one degree. Whence indeed it is ſufficiently manifeſt, that the ſame is not common Fire made of Wood and Coals. Therefore I do poſitively ſay, that our Secret Fire, in a ſhort time, is able to tranſmute the whole of *Mercury* into a red, ſweet and pleaſant Tincture, and alſo to change both humane and metallick Bodies.

Yet further, Touching the moſt fruitfull Uſe of our Alcaheſt, *bringing great Gain in Metallick Labours.*

AS we have heard that volatile common *Mercury* is fixed and rendred conſtant in Fire, by the help of our *Alcaheſt*; ſo it alſo in ſuch wiſe fixeth other Minerals, and volatile Metals, as the ſame in Cupellating, leave behind both *Sol* and *Lune*, not without notable utility. But thence eſpecially may you reap vaſt profit, if volatile *Sol* and *Luna*, extracted by *Aqua Fortis* out of Sand and Earth, be again totally fixed by help of that, in ſuch a manner, as they in Fire fly not; but yielding, permit themſelves to be melted as any other *Sol* and *Lune*. Metals, whenſoever wrought upon by the help of *Aqua Fortis*, although they were fixt before, degenerate into another Nature, and are volatilized, ſo as with a ſtrong Fire of Fuſion they fly away to the Owners great loſs. As for Example: If you diſſolve *Lune* in *Aqua Regia*, and upon the ſame Solution pour common Salt-water, the *Lune* will be precipited from the Water in the form of a white Powder, which if with other Water you well edulcorate and dry, you will have a Calx of *Lune* much more ponderous than the *Lune* was before Which kind of increaſe ariſeth onely from the ſharp Spirits of the Salt, which the Silver hath drawn into it ſelf ſo firmly, as by the benefit of Water they could not be totally ſeparated, but remain in it, not onely whilſt it is heated red-hot, but alſo in a ſtrong Fire of Fuſion, inſomuch as the *Lune* ſhews it ſelf not tractable in Fire, as any other Silver, but remains like a Stone in that vehement Fire, ſo as whilſt it is flowing, thoſe Spirits of the Salt carry away much of the Silver with them in fume; and part of it alſo penetrates into the Crucible. Wherefore ſuch *Lune* precipitated with Salt, cannot be melted again and made ductile Silver without great loſs and detriment, but appears intractable like a tranſparent Horn, whence alſo it is by Chymiſts called the *Horn of the Moon*; but I in my Writings name this Silver (as being that which is altogether volatile and fuſible) the *Mercury* of *Luna*.

In the ſame manner alſo *Saturn* may be converted into a Liquable and volatile *Mercury*, touching the admirable and profitable uſe of which, I have writ, but not publiſhed, a whole Treatiſe, which is intituled, *The Work of Saturn*: but of this no more here. The Evening of the Day now approaching, admoniſheth us to return to ſpeak of our volatile *Lune*, and to ſhew the way of reducing that into fixed and ſoft or tractable Silver; which indeed by unskilfull Men is ſuppoſed to be a difficult Art, but by skilfull Men it is known to be eaſily effected with the great Utility of the Operator.

But ſome one may ſay, what need we about that imploy our principal Cares and Meditations, to render ſuch precipitated volatile *Lune* into fixed and good Silver, ſince there are other ways of precipitating Silver from *Aqua Fortis*, viz. by the help of thin plates of *Venus*? To ſuch a Man, I thus anſwer: They who commonly ſeparate *Sol* from *Luna*, are in a great meaſure abuſed by that way of precipitation with *Venus* Plates; but they would never uſe that chargeable Precipitation, if they enjoyed the knowledge of any other more profitable. Chargeable, I ſay, is ſuch a Precipitation to thoſe that uſe it, becauſe much Water muſt be poured into the Solution, for waſhing away or weakening the force of the *Aqua Fortis*, that the *Lune* may the more

readily be precipitated by the *Venus*, and the *Aqua Fortis* alſo not diſſolve too much of the *Venus*. By this ſeparation the *Aqua Fortis* is loſt, becauſe it becomes Coppery, und unfit for a new uſe of ſeparating. For one Mark of Silver coſts in *Aqua Fortis* onely (not reckoning Labour and Workmanſhip) almoſt half an Imperial: wherefore our *Belgian* Refiners think it worth their while, if for ſeparation of every Mark of Guilt Silver, they ſpend but two *Holland* Florens, or $\frac{4}{5}$ of one Imperial, for otherwiſe they cannot gain much: Yet ſome of them will not precipitate their *Lune* with the help of *Venus* Plates, and ſo loſe their *Aqua Fortis*, but by diſtillation abſtract the *Aqua Fortis*, and afterward uſe it again. But this abſtraction is difficultly performed, and is not void of danger. For the Glaſs breaking, the Silver is ſpilt amongſt the Sand, ſo as the whole cannot be recovered again without ſome damage, and ſometimes there is great loſs. Wherefore ſuch a way of ſeparating, although you can ſave part of the *Aqua Fortis*, yet it is chargeable and alſo dangerous (when *Aqua Fortis* is to be prepared in a great quantity, as is wont to be done in metallick Mines of Gold and Silver, and alſo in Goldſmiths Shops) becauſe it requires a filthy toil, ſordid labour, great expence, and a continual tireſome and perillous trouble. I add perillous, and that deſervedly; becauſe thoſe Operators, who frequently ſeparate with *Aqua Fortis*, do very often become *Peripneumonick*, and diſeaſed in their Lungs, by attracting with their breath the Acrimony of thoſe Spirits into their Lungs, with which ſharp Spirits the Lungs being touched, are hurt, and rendred obnoxious to Putrefaction, inſomuch as among thoſe Separators you ſhall very rarely ever find an old Gray-hair'd Maſter. For ſuch Companions, even in their flouriſhing Age, are untimely hurried out of this life. But what are theſe feeble wretches able to doe, in withſtanding the great Power of Deſtiny? Of Golden-Silver, Moniers know not how to make Money before they have ſeparated the Gold from it, how great coſt ſoever they be at for ſeparating the ſame. About two years ſince I writ touching a certain Artificial method of ſeparating Gold from Silver in abundance; but becauſe I was taken ſick a little after, and have continued diſcompoſed almoſt ever ſince, I could not bring that laudable and moſt profitable Work of Separation to effect.

But afterward this my Infirmity continuing long, and I neceſſitated to keep my Bed, although troubled with no conſiderable ſenſe of pain, could do nothing, but onely bend and incline my ſerious thoughts and meditations upon Nature and Art; then God and Fortune ſhewed me the way, by which every common *Mercury* may be fixed and rendred conſtant in Fire. Which ſudden fixation of volatile *Mercury*, the Deluder of all Alchymiſts, gave me farther occaſion of fixing other volatile Subjects alſo. But among others, I ordered trial and proof to be made of a volatile *Calx* of *Lune* precipitated with ſalt Water, that I might experimentally ſee, whether ſuch volatile Silver might not be ſo bound up, as to ſuffer it ſelf, like any other *Lune* to be melted without detriment or loſs; the effect of which Trial or Proof ſucceeded according to my expectation. That indeed is a great Reward of a great Invention, inſomuch as it ſupplies me with ſufficient matter of aſſerting with *Archimedes*, It is an Invention worth the Milk of an hundred Kine. For this Fixation of volatile Silver will afford a famous Fruit of Utility in Alchymy, and eſpecially in the Separation of Gold from Silver; becauſe ſuch a way the Separation of Gold from Silver may eaſily be made; *viz.* there being no need of the Solution of Silver by *Aqua Fortis*, but it is ſufficient if the Silver be onely granulated, and the *Sol* which is in it extracted by *Aqua Regia*; becauſe that being done, you will ſee all the Silver reſiding in the bottom. And although there ſhould be half an Ounce of Gold in every Mark of Silver, yet you will need no more *Aqua Regia*, than onely ſo much as is required for the Solution of ſuch a quantity of Gold; ſo as a diligent Man, in the ſpace of one day, may very well ſeparate an hundred Marks of Golden-Silver, for the charge of three Duckets. And this artifical method of Separating may not onely be uſed by the Separators of Gold from *Lune*, but you may thence alſo reap greater profit, whenſoever you are deſirous by the help of *Aqua Fortis* to extract Silver from Stones, Sand and Clay, and to precipitate the ſame with Salt: for this way all the *Aqua Regis* will be ſaved, that *Aqua Fortis* by the addition of Salt being turned into *Aqua Regis*, which will be moſt powerfully conducent for extracting Gold out of Sand and Stones, and for precipitating by a Mercurial Precipitation of the Gold from the *Aqua Regia*, and afterward that *Aqua Regia* may again be uſed with notable profit for extracting like Gold. Touching which gainfull Extraction, the Seventh Part of the *Proſperity of our Country* largely treateth. Here my intent was onely to publiſh an Artificial, and not chargeable way of ſeparating Gold from Silver; which is ſuch a method, as I believe the World never knew before.

Thus this new-invented Work of Separation is a moſt profitable Compendium, by the benefit of which every skilfull Man hereafter may with a good courage labour, and increaſe his Goods and Fortunes honeſtly: for I believe there cannot be invented any new Work more compendious than this we have here alledged, for the ſeparation of Gold from Silver: wherefore we acquieſce in that. But if any one would be more prolixly inſtructed in this Artificial Separation, let him peruſe the above-recited Seventh Part of the *Proſperity of Germany*, where he may ſatisfie the hunger of his deſires. Here you have the *Firſt Appendix on the Seventh Part of my Spagyrical Pharmacopœa*: but in the following *Second Appendix* (God willing) I will diſcover yet greater Secrets, which may be perfected by our *Alcaheſt*, but were never yet manifeſted to the World. But at this time, courteous Reader, take in good part theſe few things here premiſed, and whatſoever excellent thing ſhall hereafter offer it ſelf, the ſame ſhall be preſented to thy Conſideration.

Therefore, ſince (as is above declared and ſhewed) our Secret *Alcaheſt* is able to enrich Mortals with many kinds of gainfull Emolument, he is in no-wiſe to be reprehended, that aſpires to the knowledge of elaborating ſo excellent a Work, *viz.* how he ſhould prepare for himſelf Oil of Vitriol or Sulphur, and that in abundance for a very ſmall charge: for nothing hinders, but that four or five pounds thereof may be prepared for the charge of one Imperial. I need not mention how Spirit of Urine may eaſily be had and prepared in abundance, *viz.* ſo ſoon as one ſhall cauſe Urine mixt with Quicklime to aſcend in a large diſtillatory *Veſica*. For if any one ſhall ſo prepare his *Alcaheſt*, eight or ten pounds thereof,

thereof, after his work is done, will ſcarcely coſt him one Imperial: wherefore he muſt needs gain much more, than if he ſhould buy the ſame of others that ſell it, for a great Price. In the mean while I doubt not, but that ſuch a moſt eaſie Coagulation or Fixation of *Mercury*, as is made by help of this *Alcaheſt*, will excite not a few of the more unskilfull Readers, to the love of Learning from expert Artiſts, the Art of preparing the *Alcaheſt* in abundance.

A Recapitulation,

OR

More ample Declaration of the precedent Secrets revealed.

Well meaning Reader,

HEre in this Appendix I do indeed treat of very few Secrets, but thoſe are very great, (which may be acquired by our Alcaheſt,*) the like of which no other Man before me did ever impart to the World. Now contemplate, and well conſider with thy ſelf this ſwift and not chargeable Fixation of* Mercury, *which ſo many famous and induſtrious Searchers have laboriouſly ſought for many hundreds of Years now paſſed, as is known to the whole World. But the greateſt part of them have ſought in vain, and with a fruitleſs and unlucky endeavour miſerably loſt all their Patrimony and Fortunes, and become the Laughing-ſtock of other more happy Perſons, being themſelves Vagabonds, which caſt an aſperſion of Ignominy on the noble Art of Chymiſtry, and have rendred the ſame ſo odious every-where among the common ſort, as no good Man (although he hath by moſt diligent ſearch obtained ſome famous Medicine) dares to profeſs himſelf the Poſſeſſor of any Eminent* Arcanum *in Chymiſtry, leſt he ſhould give any occaſion to* Ariſtarchical *Cenſurers of defaming him, and calling him a* Gold making Animal. *Aſſuredly it is very manifeſt, that in all Regions of* Europe, *and in every Age, have lived ſuch Men moſt experienced, as have not onely tranſmuted* Mercury, *but other vile Metals alſo into good Gold, ſuſtaining every Examen of Fire. But this was done very ſecretly, leſt the Artiſts themſelves ſhould fall into the hands of Tyrants.* Paracelſus, *that moſt famous Monarch of all Philoſophers, Phyſicians and Chymiſts, did indeed openly write of the Fixation of* Mercury, *but in a Character ſo abſtruſe, as in all my life I never ſaw one Man who could fix his* Coralline Mercury, *or preſent it to the ſight of ſufficient and certain Witneſſes, except* Helmont *writing, that he could prepare ſuch* Mercury, *as in Medicine would perform all whatſoever the Phyſician ſhould have need of. But that the ſame* Mercury (*as* Paracelſus *teſtifies of it from his own Experience*) *enters into Gold and augments that, and exhilerates many impoveriſhed* Alchymiſts, *reſtoring them to a more fortunate ſtate; touching theſe Effects of the ſame, the worthy* Helmont *made no mention; yet he writ, that he did himſelf fix* Mercury, *by one onely abſtraction of his* Alcaheſt, *in ſuch wiſe, as of one pound he had left in the* Cupella *ſeven ounces of good Silver, which indeed is a famous Work in Chymiſtry, and worth while; but Gold is better. Truly I muſt needs confeſs, that I have often tediouſly laboured to no purpoſe in this Work, and never could with any profit extract good* Lune *thence, onely I always had a little good Silver. Nevertheleſs afterward, when I lay Bed-rid, and by reaſon of my four years ſickneſs, had conſumed all my Goods gotten by Medicine, it pleaſed the moſt wiſe God to confer on me ſo great a Light, as by the Splendor of that I found the Royal way of operating rightly; and now I am able in a very few days to fix any common* Mercury *into a fixed red Powder, which fixed* Mercury *will undoubtedly perform Wonders in Medicine. For* Paracelſus *writes, that the dolorous Gout may be radically expelled by the benefit of the ſame.* Helmont *ſubſcribes, that the ſame will perform all a Phyſician can deſire and wiſh for. Wherefore, if the ſame be of ſo great efficacy (for I doubt not the truth of his Aſſertion) no Phyſician hath need of any other thing than this; becauſe in what part ſoever of the World he reſides, it will ſupply him with Aliments ſufficient, and he will have no need to expoſe himſelf to the ignoble ſervitude and arbitrement of another, as the greateſt part of other Mercenary Phyſicians are wont to proſtitute themſelves for hire. For by this* Mercury *onely he may acquire to himſelf Honour and Wealth enough, although he otherwiſe perform no great matter in Chymiſtry. In all Nations are found Men afflicted with grievous Diſeaſes: of which no doubt is to be made, as a little after we ſhall hear. Wherefore it ſhould be the onely care, ſtudy and endeavour of an honeſt and candid Phyſician to obtain ſuch a fixed* Mercury, *in the mean while omitting all needleſs and vain Operations, together with all fruitleſs Diſputes, without any Foundation, touching other unprofitable Remedies. Whenſoever this is, there will be no need of* Galenical Medicines, *nor of the vain Pomp of ſo many withered, unprofitable and inefficacious Herbs, or ſo many painted Boxes, Pots and Glaſſes, with other frivolous*

frivolous Expences orderly placed in Apothecaries Shops.

Now let us hear what admirable Effects our fixed Mercury *is able to manifeſt in Metallicks.* Paracelſus *writes, that it exhilerates every* Alchymiſt *reduced to a poor Eſtate, and hath ingreſs into Gold, and augments the ſame. My own Experience of this I am willing to impart to the Candid Reader, as far as I have proceeded hitherto. Therefore let the well-meaning Reader know, that I found out this Art of Fixing* Mercury *no longer ſince than in* March *laſt of this Year* 1667, *and began to make proof thereof in the following Month of* April ; *and ſo ſoon as I had found the Truth of it, I thought good to publiſh ſo great an Invention to the whole World. Yet in ſo ſhort a ſpace of Time, I could not ſearch out all that was to be found, becauſe by reaſon of my diuturnal Illneſs I was conſtrained to keep in my Bed ; therefore I haſtned the publication of ſo excellent an Invention, becauſe I feared it would happen that the inſalubrious Air of* March *or* April *ſhould be my Death, and ſo all hope of divulging ſuch a Secret be totally fruſtrated. Whatſoever I found in the ſame within that ſmall ſpace of time, I have here communicated.*

I three ſeveral times perfected the Fixation of Mercury *in a ſmall quantity, and always found it every time higher and higher, and more and more beautifull. This fixed* Mercury *I cupellated with* Saturn, *but my* Mercury *remained fixed, without any Ingreſs made into the Lead, inſomuch as from it ſelf could give no Gold. Afterward I made another Trial, and then to my fixed* Mercury *I added a little common Gold, melting them into one Maſs, I found that this Gold from the* Mercury *had increaſed it ſelf more than half ; the remaindtr of my* Mercury *had made no Ingreſs, but remained lying like a Red fixed Calx. Which kind of proof fully ſatisfied my mind, becauſe the reſidue of my* Mercury, *which had not entred into the Gold, was not loſt, but converted into an excellent Medicine. If it pleaſe the moſt wiſe God to reſtore me to my priſtine health, as I hope he will in the next Summers heat, I ſhall not acquieſce in this proof onely, but further try whether I can of this* Mercury *yet make ſome further improvement. In the mean while I ſing Praiſes to the Immortal God for ſo noble a Medicine againſt the dolorous* Gout.

Thus, Reader, you have my Experience touching the Fixed Coralline Mercury. *If I find any other more excellent Experiment of this (as I doubt not but I ſhall) I will ere it be long make thee partaker thereof in a following* Second Appendix.

Whatſoever I have above preſcribed touching the Mercury *of Wine, as being an excellent Salt, and Supreme Medicine, I did ſufficiently explain, except the Inſtrument to be made for burning the Spirit of Wine, which is not yet ſufficiently expreſſed.*

But here it is to be obſerved, that a burning Spirit extracted from Corn or other Vegetables, in no-wiſe yields ſo much Mercury, *as Spirit of Wine doth, and eſpecially if diſtilled from rich Rheniſh Wine. In like manner alſo ſo much* Mercury *cannot be had from any ſweet* French *or* Spaniſh *Wine, as from Rheniſh Wine. So ſoon as by ſearch I found the reaſon of this difference, I could from any burning Spirit made of Corn, extract as much* Mercury *as from Rheniſh Wine , inſomuch as I now (praiſe and thanks be given to God) can eaſily be without Rheniſh Wine and any other. The ſupreme Giver of all good Gifts, from his inexhauſted Fountain of Grace, hath abundantly refreſhed me with good things ; let him yet inſtill more into me, that I may again diſtill the ſame into other of his needy and officious Servants, who with me endeavour to publiſh the Magnalia of God.* Amen.

But proceeding yet further, we will briefly ſpeak of the Secret Fire *of ancient Philoſophers, being that by which they ripened their Tinctures. Therefore, for a Concluſion, let the Lover of divine and natural Wiſedom know, that ſuch a Fire is not made of Wood or Coals, but is a Firey-water, ſuch as gives forth from it ſelf neither ſmoak nor flame. The ſame is not hindred or excited by external Fire, but in the Glaſs, (about the Subject you intend to fix and dulcifie) it always burns in an equal degree, and converts the immature and harſh into ſweet and pleaſant, fixed and mature ; and alſo converts bitter Venome into ſalutary Medicine and Treacle.*

Therefore, whomſoever God illuminates with ſo great Light, as to know ſuch a Secret Fire, *he will no more need to ſeek or deſire any thing in Philoſophy and Hermetick Medicine, but will offer up inceſſant Praiſes to God, as to the Fountain of all Good , becauſe he will continually be mindfull of helping the Diſtreſſes of the Poor, and largely beſtow on thoſe Indigent Perſons, out of the abundance to him accruing by the benefit of that moſt noble Gift granted to himſelf.*

To the Supreme GOD alone be Praiſe and Glory for ever.

The End of the First Appendix.

THE

THE SECOND APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

Wherein is treated of the further uſe of our ſecret *Sal-Armoniack*, for the meliorating of the meaner Metals, and more particularly of the profitable extracting or ſeparating *Sol* and *Lune* from *Jupiter*. With a ſubjoyned information how by means of the Mercurial Water of *Jupiter*, Tinctures may be extracted in quantity not onely from *Sol*, but alſo from *Mars* and *Venus*, and all precious, as well as common Stones; and that (as it were) in a moment, without Fire or any conſiderable charge.

Faithfully Tranſlated out of the High-Dutch.

Kind READER,

IN my foregoing firſt Appendix of my Pharmacopœa Spagyrica, *I promiſed a ſecond concerning the further uſe of our ſecret* Sal-Armoniack, *that the ignorant as well as doubtfull might be fully ſatisfied of the truth. The reaſon why I rather chooſe to add two Appendixes to the ſaid ſeventh Part, than to publiſh the ſecrets therein contained, under the title of the eighth Part, is becauſe I have reſolved not to go beyond the number 7 (in which ſomething extraordinary lies hid) in any of my Writings. And foraſmuch as I have already publiſhed ſix Parts* of the welfare of my own Countrey; *I intend ſhortly to add the ſeventh Part, which ſhall contain clear and full inſtructions, without concealing the leaſt circumſtance or manual operation how every one who is but a little skill'd in Fire, may with great profit extract from Sand and Stones,* Sol *and* Lune, *and thereby get a plentifull livelyhood in any part of the World. I have alſo at preſent in hand, the two laſt Parts of my Treatiſe of* Furnaces, *five of them being already in Print, that I may in that Piece alſo compleat the number ſeven: which two laſt Furnaces are extraordinary uſefull; for in treating of the ſixth Furnace I deſcribe that Artificial Refrigeratory Inſtrument or Alembick, whereby the* Mercury *or Cæleſtial* Niter *of all Vegetables, Animals and Minerals is caught by kindling Spirit of Wine upon them, by which means the ſaid* Mercury *is ſeparated from its groſs Body, and unprofitable part, and becomes highly exalted and purified. Which inſtrument the Philoſophers have always carefully concealed. The ſeventh Part of my Furnaces ſhall contain the deſcription of a little Furnace in which with a very inconſiderable quantity of Coals and in a few hours, diſtillation may be performed by Retort, being ſuch a* Compendium *as has never yet been publiſhed to the World. In which Furnace alſo the Tinctures of Metals may with the ſecret Fire of* Artephius, *or by the proper Agent of the matter of the Stone, in a ſhort time be fixed and maturated. And if it ſhall pleaſe God to continue my Life a while longer, I intend to carry on theſe my following Works,* viz. The Mineral Work, the wonder of the World, *my* Centuries, *with other of my Writings, to the ſeventh number; but before I publiſh theſe I intend to Print ſome other Treatiſes,* viz. Of the ſecond Terreſtrial, and third Cæleſtial Purgatory, *and another* concerning God and good and evil Spirits.

Now as to the ſecond Appendix, I intend therein briefly, but fundamentally to declare the true gainfull particular as well as univerſal tranſmutation of Metals; yet not ſo, as that every lazy proud Lubber may become Maſter of theſe ſecrets, and thereby ſtrengthen himſelf in his Pride and Debauchery, by no means: but they ſhall be ſo laid down, that thoſe who have attained to ſome skill of managing Fire, may eaſily comprehend the ſame; yea the whole World will, I hope, have cauſe to rejoyce for this my faithfull Communication. And in caſe there be any that might not find clear and full ſatisfaction in this my Appendix they may read my other Writings, particularly thoſe yet to be publiſhed, wherein they will meet with a further Elucidation of theſe ſecrets.

And as for thoſe my good old Friends who never baſely complied with the Enemies of Art and Truth, to them I am (as I always was) ready to communicate a ſhorter and neaȩer way than it is fitting here to expoſe to every Man.

Of the further profitable uſe of our ſecret Sal-Armoniack *for the Melioration of Metals.*

IN the ſeventh part of my *Pharmacopœa Spagyrica*, I have at large declared how our ſecret *Sal-Armoniack* is to be made together with the uſe of it in the preparation of many excellent Medicines, hitherto unknown. And becauſe therein I did not diſcover all, I added to it an Appendix, treating concerning the uſe of the ſaid *Sal-Armoniack* and other profitable ſecrets. But foraſmuch as the virtues of the ſaid *Sal-Armoniack* are great and unfathomable, I have thought good to add the ſecond Appendix, which ſpeaks of its uſe in meliorating the meaner metals. I intend therefore in this writing to diſcover great things, neither ſhall the Worlds ingratitude deter me from ſo doing. I ſhall begin with *Saturn* and *Jupiter*, and afterwards treat of the melioration of other meaner metals, *viz. Mars* and *Venus*, how by Art their corruptible and combuſtible *Sulphur* may be ſeparated from them, and their purer part, (*viz. Sol* and *Lune* which are hid in them) extracted and made viſible.

Lead and Tin, to outward aſpect do much reſemble one another, ſave onely that *Jupiter* is whiter, for which reaſon the Philoſophers have called it white Lead, *Antimony* black Lead, and *Biſmuth* gray Lead; becauſe all of them like Lead, eaſily melt in the Fire.

Concerning *Saturn* and *Jupiter* (being the higheſt Planets in the Firmament) the Heathen Philoſophers have writ much in their Fables: as amongſt other things, that *Jupiter* drove his Father *Saturn* from his Kingdom, and made himſelf Maſter of it and other like Stories; in all which they obſcurely hinted to us the tranſmutation of Metals. For theſe Poetical Fables though they ſeem trifling and fooliſh to thoſe who have not attained to any conſiderable experience in Fire, ſo that of one thouſand Readers ſcarce one reaches the true ground of them, (though 'tis known they were writ by men of great learning and experience) yet they whoſe underſtanding God enlightens find in them an hidden Treaſure.

Now to the end I may not bury the Talent God has been pleaſed to beſtow upon me, but improve it for the good of the World, I ſhall here diſcover the melioration of *Jupiter* and *Saturn* to the glory of God the Author of all good, and for the uſe of all mankind, without reſpect of Perſons, whether they be Friends or Enemies: the good and virtuous will without doubt thankfully accept this my communication, and to the ungratefull and unworthy, this my well-meaning diſcovery of ſuch profitable ſecrets will but heap Coals on their Heads. Wherefore it ſhall not repent me though it ſhould come to the hands of my worſt Enemies, as being ſufficiently contented in this that I am any way inſtrumental in making known the wonders of God and nature to the World.

Thus in the name of God without envy or repining I proceed according to his command, to do good to Friends and Enemies, good and bad: if the wicked abuſe any of theſe ſecrets, God in his due time will meet with them, and pay them in their own Coin. Follows now the nature and property of *Jupiter* and *Saturn*, according as they have been diſcovered to me by Fire.

Of the nature and property of Lead.

Saturn is an immature Metal, made up of much groſs *Mercury* and little *Sulphur* which is impure. Its Salt much reſembles Salt-peter, which is the cauſe of its coldneſs and eaſie fuſibility. When its *Mercury* is purged from the impure *Sulphur*, it becomes like Gold in weight, and may by Art be reduced to the colour and fixedneſs of Gold. When its ſuperfluous combuſtible *Sulphur* and nitrous Salt from whence proceed its ready fluxibility, and piercing and devouring nature are ſeparated from it, all true Philoſophers witneſs that there the *Mercury* of Lead may be turned to Gold, for they call Lead their leprous Gold. Now as the Leproſie in Man proceeds from a cold moiſt and over Salt Conſtitution of Blood, which corroding the Skin and Fleſh produces ſuch an abominable Scab upon the Body, eſpecially in thoſe parts where moiſture moſt abounds, *viz.* about the Noſe, Ears, Eyes, *&c.* but where the whole maſs of the Blood is become corroſive, there it ſpreads over all the Body ſparing no part, but filling it with Sores and Ulcers; ſo as at length where no potent Remedies are uſed to mortifie this malign corroſive humour, it deſtroys the Body and Death follows. To cure which formidable Malady, the Ancients made choiſe of fixed Gold, as not being ſubject to any corruption, which wiſe intention of theirs is very prepoſterouſly imitated by our *Galeniſts*, who when they find that their helpleſs and unprofitable Medicaments want the deſired ſucceſs about their Patients, and that ſmall hope of ſaving them is left, betake themſelves to Gold, Silver and Precious Stones, for to help at this dead lift. But let ſuch as theſe remember that they will find it hard to anſwer theſe their proceedings one day, by which they onely poſt their patients out of the World: for what can the ſtomach of any man, but eſpecially of the weak and ſick do with the filings or leaves of Gold and Silver, or the Powder of Precious Stones? can we ſuppoſe that the Stomach can draw any virtue from thoſe things, that the moſt corroſive Waters will ſcarce touch? But this hath been ſo often inculcated by others, that it is matter of wonder, that ſuch fooliſh

and

and fruitleſs ingredients have not been long ſince exploded and laid ſide, being indeed nothing elſe but the ſhame and reproach of Phyſicians; and all that can be ſaid for them is, that they muſt be well paid for, and ſo help to make the Pot boil; without doubt when the promiſed *Elias Artiſta* ſhall come, he will put an end to all this unprofitable ſtuff, and inſtead therefore reſtore true powerfull Medicaments; to which good end I hope my *Purgatory of the Philoſophers*, with *the Sixth and Seventh Part of my Furnaces* will not a little contribute. Thus it ſeems Truth muſt yet for a while be deſpis'd and oppreſs'd, till God, the truth it ſelf, be pleaſed to raiſe up a mighty Hero to deliver it from Contempt, and Crown it with glory and honour.

It cannot be denied, but ſome experienc'd Philoſophers, as *Paracelſus* and others have declar'd, that with Gold and precious Stones wonders may be done in Phyſick, when firſt they be reduced to potability; but have always condemn'd the uſe of their compact and fixt Bodies, which are inſuperable by Fire it ſelf, and therefore much more by the gentle heat of the Stomach. And indeed if thoſe Phyſicians, who ignorantly make uſe of ſuch groſs and compact Bodies, did know the living Gold, Silver and precious Stones of the Philoſophers, and the due application of them to the ſick, they would by this means get more honour, and not be ſo injurious to their Neighbour, as they are, by exhibiting ſuch unprofitable and hurtfull things for Remedies.

I cannot but on this occaſion ſpeak a word of the Leproſie and its cure; which being confeſſedly a Saturnine diſeaſe, may eaſily be cured by Saturnine Medicaments, ſuch as are Black Lead, the *Antimony* of Wiſe men, or *Magneſia* of *Saturn*, being duely prepared. But to return to our Lead or Leprous Gold, and enquire how we may beſt rid him of his Melancholy Leproſie, and inſtead thereof reſtore to him a healthy ſanguine complexion, which can no way better be done than by evacuating his ſharp corroſive blood, or dulcifying of it. For, as has been ſaid, Lead contains a ſharp ſal-nitrous Spirit, which corrodes and devours all hard things, which the Ancients have intimated by their portraying him with a ſharp Sythe in one hand, and in the other holding a young Child, which he devours; wherefore alſo he is called a devourer of Infants, and a ravenous Wolf. Which ravenous property he expreſſes to the life, when on the Cupel he devours whatſoever is added to him, and therefore is called an unmercifull Father to his Children, becauſe he devours and deſtroys them. According to all Philoſophers and Aſtronomers he is the higheſt and firſt of all the Planets in the Firmament, upon which account the other Planets and Metals, *viz. Sol*, *Luna*, *Jupiter*, *Mars*, *Venus* and *Mercury* are call'd his Children, though improperly, for they are his Brethren, which he devours, ſwallows and deſtroys on the fiery Cupel, except *Sol* and *Luna*, which though he ſwallows as well as his other Brethren, yet can he not concoct or digeſt them, but is fain to vomit them up again, and they are ſo far from receiving any hurt in the Stomach of that ravenous Wolf, that they come forth much purer than before, leaving all their filth behind them. So that this devouring Glutton, notwithſtanding the corroſive acidity of his Stomach cannot conſume Gold or Silver, but robs them onely of their ſuperfluous Sulphur, which is the corrupter of the *Mercury* in Metals, of which *Paracelſus* excellently writes in his *Cælum Philoſophorum*, which I have quoted in my firſt Appendix concerning the uſe of the *Alcahеſt*.

Now that there is a great acidity in Lead, appears from this inſtance; becauſe when it is melted, it pierces the Crucible, and runs through; and therefore Cupels have been invented, made of Bone-aſhes, which he cannot eat through, but ſinks like water into them. Yet there are alſo Crucibles made of Coal-duſt and good Earth proportionably temper'd together, which can hold *Saturn* in Flux for a year together, without ever piercing them: of which more may be ſeen in my other Writings.

This then is the Nature and Property of *Saturn*; he contains much, but impure *Mercury*, and a ſharp corroſive Salt-peter Spirit; when he is rid of theſe, he affords good Gold and Silver, yet not alone and of himſelf, but with help of his Brother *Jupiter*, whoſe ſuperfluous Sulphur kindles the Nitrous Spirit in Lead, and conſumes it; ſo that by this enkindling, not onely the hurtfull Salt-peter in Lead, but alſo the ſuperfluous Sulphur in Tin are both conſumed and deſtroyed. This being done, if the Tin thus mixed with Lead be driven off on the Cupel, they will yield Gold and Silver enough for a competent livelihood.

If thou would'ſt be further aſſured that Lead contains a ſharp Salt-peter Spirit, which by no other way can be taken from him, than by his enemy Sulphur, by whoſe means it is kindled and conſumed, the following Experiment will give thee full ſatisfaction. Onely by the way note, that this conſuming of the Nitre in Lead, does very much alter its Nature, making it hard, and of difficult fuſion like Iron, ſo that great Guns may be made of it. Now the Experiment is this: Take of the filings of Lead three parts, of Brimſtone in Powder one part, put them into a Crucible, ſurrounded with Charcoal, ſo as it may heat leiſurely and by degrees; by this means the Brimſtone will penetrate the Lead, and mortifie its Nitrous Spirit, which is the cauſe of its eaſie fluxibility, and at the ſame time the Sulphur becomes mortified alſo, which before was more fluxible than the Lead, but now by its union with the Lead, is very hard to be fluxed. This mortification or induration of Lead, with common Brimſtone, affords no Melioration, and is onely here inſtanced, to demonſtrate there is a Salt-peter in Lead, and that Salt-peter and Lead, which both are ſo very fluxible, do harden and mortifie one another. But now when the Salt-peter that is in Lead is kindled and conſumed by the Sulphur that is in Tin, then one Metal meliorates the other, and the hurtfull ſuperfluity of both is deſtroyed, *viz.* the Nitre that is in Lead, and the Combuſtible Sulphur in Tin, from whence neceſſarily a melioration muſt enſue.

That Sulphur kills the Nitre in Lead, and makes it hard, thou mayſt yet be ſatisfied another way, *viz.* Take ſome ounces of Lead, melt them in a Crucible, and ever and anon caſt in a little piece of Brimſtone into it; continue this till thy Lead be become hard and influxible, by which means thou wilt be aſſured that there is Nitre in Lead. And that there is Sulphur in Tin, appears in that when it is joined with Lead, they kindle and conſume one another.

If thou deſireſt yet further to be confirmed, that there is Nitre in Lead, which makes it melt ſo readily, and fret through every thing; then do thus:

Take

Take Lead and melt him red-hot in a Crucible, and immediately he will pierce the Crucible and run out; take another Crucible and put Lead into it alſo, caſting, as ſoon as it is melted, ſmall bits of Brimſtone upon it, which will ſo mortifie the fretting Nitrous Spirit in Lead, that he will be no more able to pierce the Crucible, but will for a long time continue red-hot in the ſame.

If this demonſtration neither will ſatisfie thee, that the fretting nature of Lead proceeds from a ſharp Mineral Salt-peter Spirit, thou mayſt further prove it thus: Abſtract from two ounces of filings of Lead an ounce and an half of Oil of Vitriol or Spirit of Salt in a ſmall Retort, in which operation the dry Lead will draw to it the ſharp Saline Spirit, and that which comes over will be meer inſipid Phlegm, retaining nothing of its former corroſiveneſs. The diſtillation performed, take thy Lead out of the Retort, and try whether it be become more ſharp by the addition of the ſaid Corroſive Spirit, but thou wilt find that the Lead has taken in the ſharp Saline Spirit, coagulated it, and changed it into a ſweet Stone, in which no manner of corroſiveneſs can be taſted or perceived. Now if this be true, that Lead can turn ſuch a ſtrong corroſive Oil into a ſweet Stone, we need not wonder that he has a power to coagulate, hide, and make inviſible his own in born Saline Spirit. Concerning which matter thou mayſt read more in a ſmall Treatiſe of mine of the Principles of Metals, wherein ſpeaking of the Coagulation of Saline Spirits, I obſerve that Lead has the nature and property of Coagulating all ſharp and corroſive Saline Spirits. If this inſtance have not ſufficiently inſtructed thee, thou mayſt make another proof thus: Take the fore-mentioned Lead, acuated with Saline Spirits, and melt it in a tripple Crucible with a fire of Fuſion, let it be red-hot in Flux, and thou wilt find that in a moment it will run through thy three Crucibles, which common Lead would never do, from whence it is clear as the Sun that the piercing, fretting quality which is in Lead, proceeds from the Saline Spirits coagulated in or with it. Conſider well of how great uſe ſuch a Lead, whoſe natural devouring Faculty or Sythe is ſo highly acuated by Art, might be in the work of Tranſmutation, if we knew to make good uſe of it. The Philoſophers writing of *Saturn*'s ſharp Sythe, expreſs themſelves in theſe words, *Falx ejus mordax eſt, His Sythe is ſharp or biting:* which how it may be made much ſharper by Saline Spirits, has now been ſaid. A further enlargement might here be made concerning *Saturn*'s Sythe; but it ſhall ſuffice at preſent to have demonſtrated, that his eaſie fluxibility, and fretting devouring nature, proceeds onely from a ſharp Nitrous Spirit; which when Sulphur has conſumed and burnt away, much Gold and Silver may be ſeparated from him.

Of the Nature and Property of Jupiter, *what he wants, and what he hath too much of, and how his noxious ſuperfluities may be removed, ſo as on the Cupel he may yield his hidden Gold and Silver.*

TIN by the Heathen Philoſophers has been appropriated to the Heathen God (or rather Planet) *Jupiter*, who has the next place in the Firmament to *Saturn*; is by the Miners called White Lead, and like it melts with a ſmall heat, and eaſily unites with his Brother *Saturn*, continuing together in a moderate heat; but they no ſooner become red-hot, but their Brotherly love is changed to enmity, not being able to endure one another in a ſtrong fire, but each ſtriving to get looſe from the other, which yet cannot be without the loſs of one or both of their lives; ſo that this their combat may well be compared to the fighting of the Peaſants in *Lapland*, whoſe cuſtome is when two of them are highly incenſed againſt each other, to ſuffer themſelves to be tied faſt together, ſo as they cannot fly back or run away, and then fall to cutting and ſlaſhing one another ſo long with their knives, till the Death of one or both of them follows.

But to return from whence we have digreſſed. That *Saturn* and *Jupiter* are Brothers, the Heathen Hiſtory informs us, relating that the four Brothers, *Saturn*, *Jupiter*, *Neptune* and *Pluto*, their chief Gods, fell into diſcord amongſt themſelves which of them ſhould be the greateſt; which conteſt of theirs was at laſt by the mediation of the other Gods compoſed, they agreeing to divide the Empire of the World between them. And though *Saturn* were older than his Brother *Jupiter*, yet was he fain to content himſelf with the command of the Earth, whilſt *Jupiter* took upon him that of Heaven, *Neptune* that of the Sea, and *Pluto* the Dominion of Hell. Which Diviſion will not at all ſeem ſtrange to thoſe that underſtand Nature, who find that each Brothers lot was very correſpondent and comporting with their nature. The Nature of *Saturn* much reſembles the Earth, and he makes all things that he takes to him like the Earth; as appears from the fore-mentioned conteſt with his Brother *Jupiter*. But *Jupiter*, becauſe inwardly he is very ſulphureous and fiery, therefore is the Government of the fiery Heaven properly deputed to him, leaving *Saturn* to dig and moil in the Earth: Wherefore alſo the Ancients have repreſented him with a Spade in his hand, thereby intimating his Property of digging through or piercing all things: whereas they figured *Jupiter* with Thunder-bolts, and fiery Lightning-flaſhes in his hand, whence came that Proverb, *Procul à Jove, procul à Fulmine*; *Far from* Jupiter, *far from his Thunder-bolts.*

Now that Tin contains much Sulphur, may be thus experimented: Take the filings of Tin and powder'd Nitre, mix and put them into a Crucible over the fire, and they will kindle and conſume one another, ſo as nothing will be left in the Crucible. Or it may be tried thus: Melt ſome Tin in a Cruce, and when 'tis red-hot, caſt in ſome Nitre upon it, which kindles the Tin, the flame carrying part of it away, and the reſt is burnt to droſs or fæces. But not to inſiſt on this, it being very notorious that the greateſt part of Tin is nothing elſe but combuſtible Sulphur, the remaining part being a ſolar pure Mercury: ſo that when this Sulphur is by art wholly ſeparated from its pure Mercury, the ſame is eaſily ripened to Gold, by being joined with cold *Saturn*, which the following Praxis will abundantly make out.

'Tis worth our noting here, that this Sulphur of Tin doth not burn away, when the Tin without any addition is put to the fire, but doth then in the heat ſeize and lay hold of its own Mercury, burning and reducing the ſame to Aſhes, which are very hardly to be reduced to a Metal without ſome addition: neither will Lead join with theſe Aſhes, but thruſts them out from him, turning them to a white Glaſs; which is the reaſon why ſo few are found, who with profit can ſeparate the Gold and Silver which is in it.

it. *Paracelſus* in his *Cœlum Philoſophorum* ſaith expreſly that much Gold and Silver lies hid in Tin. We read alſo of others that have had the Art of it, and have thence extracted great treaſures of Gold and Silver; amongſt others *Bruſchius* in his Deſcription of *Fichtelberg*, gives us the Hiſtory of a Citizen of *Eger*, on the Borders of *Bohemia*, ſome few miles diſtant from the City *Nurnberg*, who had the skill of ſeparating the *Sol* and *Lune* which is in Tin to great advantage, having been enabled thereby not onely to build an Hoſpital and Church in the ſaid place, but alſo richly to endow the ſame for the maintenance of twelve old Men and three Prieſts in the ſaid Hoſpital. This Perſon, whoſe name was *Sigiſmund Wan*, ſuffer'd this Art to die with him, but withall left a Propheſie behind him that the ſaid Art 200 years after ſhould riſe again, and be made known to the World. Which Propheſie though *Bruſchius* in his foreſaid deſcription make no mention of, yet is undoubtedly true: and there is a Book in Manuſcipt, which is very common amongſt the Miners and other Artificers belonging to the ſaid *Fichtelberg*, which I have ſeen, and read in it the ſaid Propheſie, though at that time being young and unexperienc'd in the nature of Tin, I little minded it. But ſince God has been pleaſed in this my far advanced old Age, without any thing of my ſeeking, out of his meer grace and mercy to reveal the ſaid Art unto me, it hath given me occaſion to call to mind what formerly I had read, and put me upon reading the ſaid Book over again, where I found that his Propheſie was exactly fulfilled, for this *Sigiſmund Wan* died in the year 1467, from whence to this preſent year 1667, are juſt 200 years. This Propheſie being thus preciſely accompliſhed, I thought fit to ſet down ſome part, of the ſaid *Bruſchius* his Relation, from whence it appears that God doth often impart ſuch skill and knowledge to good and honeſt People, whereby they are enabled not onely to ſupply themſelves, but alſo to make liberal Proviſion for the Poor. The words of *Bruſchius* are theſe, *Wohnſiedel* has no extraordinary Buildings, beſides a ſtately and richly endowed Hoſpital, which was built in the year 1467, by a Citizen of the place named *Sigiſmund Wan*, though at the time of his building the ſaid Hoſpital, he was a Citizen of *Eger*. He had to Wife a *Venetian* Woman called *Barbara*, who had great skill in Alchymy, and in particular the Art of ſeparating Gold and Silver from Tin, by which means he became very rich, and having no Children, built the ſaid Hoſpital, conſtituting the Magiſtrates of *Eger* Guardians of the ſame, left them a great Summ of Money, with the Intereſt of which they maintain twelve old Men, and three Prieſts. Near the ſaid Hoſpital, is a very fair Church built by the ſaid *Sigiſmund*, where to this day a Picture is to be ſeen, containing the Pourctratures of the Founder and Foundreſs of the Church and Hoſpital, with the time and hour of their Deaths. This *Sigiſmund* lived at *Eger* the latter part of his life; and wrought his gainfull Work in the ſame Houſe, wherein at preſent dwells *Andrew Griffen*.

Thus far *Bruſchius*, from whoſe Relation it appears that there have been thoſe who from the meaner Metals, and particularly Tin, have been able to ſeparate Gold and Silver with great gain, ſo as to procure great riches thereby. We find alſo that in thoſe times charity was more exerciſed than at preſent, when men inſtead of building Hoſpitals, are rather ready to convert them, with their Revenues to their own uſe. For which wickedneſs of this Age, God ſeems to withdraw his bleſſing from the Earth, ſo that Mines do not ſo much abound, nor are ſo rich by far as formerly. How many places in *Germany* have we known bleſt with Gold and Silver Mines, as alſo with Lead and Tin Mines, containing much Gold and Silver, of which nothing is to be found now? And this ſame Tin Mine from whence *Sigiſmund Evan* extracted ſo much Gold and Silver, has now for near 200 years yielded no Oar at all. About the ſame time alſo there was a very rich Gold Mine, in an adjacent little City called Gold *Granach*; which is in like manner wholly exhauſted and loſt In the ſame Gold Mine, Antimony, alſo which is the Root of Gold, was found in that quantity, as from thence it was tranſported to all parts of *Europe*, but now very little of it is to be found there, and that which is found, contains no Gold at all, whereas that which was digged there before did abound with it. In like manner the *Hungarian* and *Tranſylvanian* Mines of Antimony ſo rich in Gold, which flouriſhed about 200 years ſince, are now quite ſpent ſo as no more Antimony is to be found there. Since which time the rich Silver Mines in *Jochems* that have been diſcoverd, which yielded an incredible quantity of Silver, but did not continue long ſo, God, for the ingratitude and wickedneſs of men ſuffering it to ſink away; of which many more inſtances might be given but theſe ſhall ſuffice.

But to return to our interrupted diſcourſe. 'Tis well known that all unripe Metals, when by the violence of Fire they are melted and ſeparated from their Oar, do ſend forth a poiſonous Arſenical Exhalation; yea even after they are wholly ſeparated from their Oar, they ceaſe not to exhale poiſonous fumes, though not comparable with thoſe they ſend forth when they are firſt melted from their Oar: as appears particularly in Tin, for if Wine be over night put into a new Tin Pot, it will give a Vomit the next morning. Copper alſo does the like; but Lead not ſo much, or rather nothing at all: whereas Iron gently purges downward, is wholſome and opens obſtructions; for Iron is onely endowed with a fix Sulphur, and contains no Arſenick, as Tin doth. Gold and Silver contain neither Sulphur nor Arſenick, and therefore the Wine that is put into them is not at all changed.

Seeing then that Tin has ſome Arſenick joyn'd with it, which cauſeth the foreſaid alteration in the Wine, whereas in Gold and Silver it is not changed at all, becauſe they are free from all fœtid cumbuſtible Sulphur and Arſenick; if we deſire to rid Tin of its poiſonous quality, and make it like Gold and Silver by removing its ſuperfluities, we muſt do it by Art. We ſee that *Mercury* of it ſelf is no Poyſon, but becomes ſo when ſublimb'd with Salts or otherwiſe joyn'd with them, by which means it becomes poiſonous and volatile. This is notorious, and all Chymiſts believe and acknowledge it, and we have as much reaſon to believe, that the ſame is the caſe of Arſenick and Cobalt, *viz.* that Arſenick would be no Poyſon of it ſelf, but by reaſon of ſome ſaline Spirit joyn'd with it in the Earth. We find alſo that Arſenick when it comes firſt out of the Earth of a grayiſh colour is nothing near ſo poiſonous, as it becomes afterwards by being ſublimed with Salts, for to make it white and tranſparent. For though Salts in themſelves be not poiſonous, yet when Minerals are in certain ways prepared with them they turn

them to Poiſons, for every volatile Mineral that is joyn'd with ſaline Spirits is poiſonous, but when the ſame Minerals are fixed, they loſe their poiſonous quality and become good Medicines, as may be ſeen in Arſenick, Cobalt, Orpiment and other poiſonous volatile Minerals, which being fixed, by running them down with Salt-peter, may ſafely be exhibited againſt ſeveral Diſeaſes. Which being ſo it will be eaſie to infer, that if we can fix the volatile Sulphur and Arſenick which is in Tin, we ſhall not onely take away its Poyſon and make it medicinal, but alſo make it like Gold and Silver.

Let this then be laid as a ſure foundation, that corroſive ſaline Spirits are the cauſes of all Poyſon, making fix matters to become volatile and poiſonous, and conſequently that volatile immature metals, as Lead and Tin, when their corroſive Spirits are mortified or driven away, become fixed. It is well known that the combuſtible noxious Sulphur of Metals, is the ſole cauſe of their imperfection, and that this combuſtible Sulphur has no greater enemy than Salt-peter, by which it is kill'd and deſtroyed, and yet no better Friend neither, which though at firſt ſight it may ſeem contradictorioy, yet is very true; for when the Niter does conſume the cumbuſtible Sulphur, it is indeed its enemy, but when by this Conſumption of the naughty Sulphur, the incombuſtible ſolar Sulphur of Tin becomes purged from its heterogeneous mixtures, we ſhall find that indeed Niter is the friend of Tin, as ſetting the ſolar Sulphur of Tin free from the captivity of its noxious Sulphur, ſo as now it can unite with Gold and Silver, and become ſuch it ſelf, which before was impoſſible. Thus we ſee that the conſuming and mortifying of the ſuperfluous Sulphur, is the life and deliverance of the incombuſtible Sulphur, and the corruption of the one, the regeneration of the other. To which purpoſe *Paracelſus* ſpeaks excellently, ſaying that *Corruption makes things perfectly good, for by means of it the evil that hides and abſconds the good, being taken away, the good manifeſts it ſelf*; Which is very true of Tin whoſe ſolar Sulphur being hid and held by its noxious Sulphur, the ſame muſt be taken away, before Gold and Silver can be extracted from it. Which ſeparation of the combuſtible from the incombuſtible Sulphur, muſt not be done with common Niter, which is too vehement for the nature of Tin, and would deſtroy the good with the bad, but a more mild and proper Salt-peter muſt be taken, *viz.* that which is hid in Lead, which is powerfull enough to kindle and conſume the ſuperfluous Sulphur of Tin, and ſet its ſolar Sulphur free, as will appear from the following Proceſs.

When therefore thou art minded to ſet upon this gainfull particular, and together univerſal Work, I would not have thee to be too covetous nor to begin with too great a quantity of Tin in hopes thereby to become rich of a ſudden; but adviſe thee to begin with onely two or three pound of Tin, and try whether the Art be true or no, and if true what gain may thence be expected. And if thou find'ſt it to anſwer thy expectations, thou mayſt then work in as great quantities as thou pleaſeſt, but if thou find'ſt that thou canſt not bring it to the deſired end, thou muſt be content to go to School a little longer, and learn to be more a maſter of Fire; or elſe leave it off altogether concluding thou art not predeſtinated to this Work. It is not enough to think thou canſt do it, thou muſt have the Art of it, elſe thy thinking will little avail thee. What I write here, is no other than the truth, of which the Reader may aſſure himſelf.

A Proceſs for to ſeparate Gold and Silver with great profit from Tin.

SET on a Cupel under a Muffel one, two, three pound more or leſs of Lead, let it be red hot, then caſt into it half an ounce, one ounce or an ounce an half of Tin, and you'l ſee the Tin mount above the Lead, and the Sulphur of the *Jupiter* will kindle the Salt-peter of the Lead, and turn to yellow Aſhes, which ſtill muſt be taken away with an Iron Inſtrument for that purpoſe, as long as any of the ſaid Aſhes, mount or appear on the ſurface of the Lead. When no more Aſhes appear, then caſt in a freſh quantity of Tin as before, turning the ſame to Aſhes till no more riſe. Continue ſo long with the incineration of freſh Tin, untill all the Lead and Tin be turned to Aſhes. Then mix theſe Aſhes with half as much of our ſecret *Sal-Armoniack*, and by Retort diſtill the *Sal-Armoniack* from it, which may ſerve again for the ſame Work. In this Diſtillation the *Sal-Armoniack*, draws to it the Sulphur of the Tin, and turns it to Fæces, and the pure part of the Lead and Tin are left in a *Regulus* at the bottom, which after Diſtillation may be beat from the *Scoriæ*: and becauſe the *Regulus* of Lead in this operation proves ſomewhat flat and platy, we may lay it croſs on an Anvil, and ſtrike it crooked with an Hammer, and ſo the *Scoria* will fall from it, which are carefully to be kept, as being of good uſe, which will appear hereafter. If we deſire to make a better ſeparation of the *Scoriæ* from the ſaid *Regulus* of Lead, we may put the ſaid *Regulus* with its Fæces into a Crucible, and having given it a Fire of Fuſion, pour out the *Regulus* into a Cone, and the *Scoriæ* will abide in the Cruce, as being of more difficult fuſion than the *Regulus*. This *Regulus* of Lead, muſt again be ſet upon the Cupel, and when red hot, we muſt put Tin to it as before, incinerate the ſame and gather the Aſhes, then mix them with *Sal-Armoniack*, diſtill and ſeparate the *Scoriæ* from the *Regulus* as before. This labour muſt be ſo oft repeated till all the Lead and Tin be turn'd to Aſhes, which will be in three or four times, after which onely a ſmall *Regulus* will be left, which we muſt refine on the Cupel like other Lead, and thus the Gold and Silver which was in the Tin, will be left on the Cupel, which muſt be granulated, and the Gold and Silver ſeparated from each other with *Aqua Fortis*.

The *Scoriæ* proceeding from this Work muſt not be deſpiſed, being more worth than the Gold and Silver which are left on the Cupel. This work being well performed, every pound of Tin will yield ſome Crowns in Gold and Silver, which richly pays both coſt and pains. And he that has the skill to prepare the ſaid *Sal-Armoniack* by a compendious way, may expect the greater profit from this Work. The *Sal-Armoniack* which comes over by Diſtillation, will ſerve for the ſame purpoſe again, nothing of it being diminiſhed, but what abides with the *Scoriæ*, which by making a Lye of the *Scoriæ* may alſo be ſaved, by which means a wonderfull Salt is obtained, which abounds with many and great virtues; concerning which we intend (God willing) to treat at large in our third Appendix, I had intended indeed to ſpeak of it here, but I find this Appendix

dix is grown too big under my hands; and therefore ſhall refer the ſuperlative great virtues of the ſaid wonderfull Salt to my Third Book. Yet to the end, that the Lover of Art in the mean time, till my Third Appendix be publiſhed, may not altogether be ignorant of what great things may be performed by it, I have thought good to inform him, that I have often in my other Writings made mention of this Secret *Sal-Armoniack*, yet concealing its preparation, *viz.* in my Book of *Dialogues*, ſpeaking of the Preparation of the Lion's Blood. In my Treatiſe of *Elias Artiſta* I have called this Salt, Salt of Art, as alſo the Biſhop aud High Prieſt of Metals, and there at large informed the Curious, how by means thereof they may inſeparably conjoin Gold and Silver. In other of my Writings I have given it other names. This wonderfull Salt of which I have treated in my Book of the Three Principles, ſhewing it to be that wherewith *Jupiter* changed himſelf into a golden ſhower, and got entrance through the Tiles into the ſtrong Tower where *Danae* was ſhut up, thus beguiling her, and begetting on her *Perſeus* the Deſtroyer of the Sea-Monſter, and Deliverer of the Beautifull *Andromeda*, whom he took to Wife; and afterward vanquiſhed the *Gorgones*, keepers of the Golden Apple bearing Orchard, *&c.*

This our Salt of Art is the Secret Chalybs of *Sendvogius*, wherewith he extracts the Tincture of Gold, and of it prepares the tinging Stone of the Philoſophers. This our Salt of Art is alſo that *Juno*, to whom (as *Virgil* relates) the Golden Bough broke off by *Proſerpina* from the Dark tree is conſecrated: of which I have elſewhere treated more at large. This Salt alſo is our *Proſerpina* the Goddeſs of Hell and Wife of *Pluto*, and is much more ready and handy in breaking off the ſaid Golden Bough, than that *Proſerpina* which by Diſtillation (with great toil and labour) breaks off her Golden Branches: for this our *Proſerpina* performs it without fire, or any trouble to ſpeak of, and offers it up to the Goddeſs *Juno*. Which ingenious and profitable Work I intend (God willing) to ſet down in my Third Appendix; wherein I ſhall communicate to the World a perpetual Minera of Gold and Silver, which every one without any great pains may in ſtillneſs work in his own houſe: For there is no eaſier way to extract the hidden Gold from all Metals in quantity and without fire, than by means of this our Goddeſs *Juno*, or Jovial *Proſerpina*.

Let the Reader who deſires to know further of theſe Poetical Fables, read the ingenious *Ovid*, and others who make it their buſineſs to treat of them: and in reading he will obſerve, that *Jupiter* is by them repreſented to be the God of Fire and Lightning, and *Juno* his Wife and Siſter the Goddeſs of the Air; whence we may gather, that by the word *Juno* is to be underſtood a ſpiritual volatile moiſture and watry *Jupiter*. Now the Artiſt who has *Juno* for his Friend and Advocate, may eaſily obtain from *Phœbus* great Treaſures, as well for the health of the Body, as of outward Riches; and this is ſo eaſie to be done, and with ſo little charges, that I dare not be ſo bold to write more of it, leſt the wicked and unworthy ſhould ſmell out the reſt.

Now foraſmuch as this Appendix is ſwoln to a bigger bulk than I had intended, I ſhall refer the melioration of Iron and Copper, by means of our Secret *Sal-Armoniack* to our Third Appendix. And ſhall onely ſay thus much at preſent, that theſe two deſpiſed Metals, do afford more profit, and with leſs charge and trouble than Lead and Tin; which Proceſs I intend to communicate in my next Appendix.

If any find the trouble and charges of Preparing our *Sal-Armoniack* too great, he may attempt the Work with common *Sal-Armoniack* ſublimed; and if that do not fully anſwer his deſire, he may afterward prepare ours, or get it of thoſe that make it in quantity. If it pleaſe God that I live over next Summer, I intend my ſelf to work this profitable Proceſs of extracting *Sol* from Tin; as alſo to extract the Tinctures of Copper and Iron with our *Alcaheſt*, in great quantity, and to give the over-plus of Profit to the Poor for a Memorial to the World. In the mean time I have here at large declared how the ſuperfluities of Lead and Tin are to be removed, in order to the ſeparating of the Gold and Silver contained in them; and this without concealing any of the Manual Operations thereto belonging: though I queſtion not but many who may attempt the ſame, will by miſtaking ſome Point or other fail of their end. Above all, great care muſt be had that the Tin be not mixed with Copper or *Regulus* of Antimony, which will make the Aſhes hard and irreducible; the *Sal-Armoniack* alſo muſt be well prepared, ſharp and penetrative, that it may work upon the Tin aſhes, and make them fluxible and reducible to Metal. Neither muſt the Tin-aſhes be ſuffer'd to lye too long on the Lead, but continually be taken away, for otherwiſe they will become hard and influxible. In a word, 'tis practiſe onely and experience can make a man Maſter of this Work, it being impoſſible to ſet down all particulars ſo clear and diſtinct, as that the unexperienced may not eaſily miſtake. In caſe therefore this my Appendix ſhould ſeem too dark to any one, let him have patience till my Third Appendix be publiſhed, in which I intend to communicate a much more eaſie Proceſs for extracting Gold and Silver out of Lead, Tin, Iron and Copper.

There is alſo a way of turning fine Tin alone by it ſelf into Aſhes, by ſtirring it continually in an Iron Pot over the fire, which Aſhes muſt be reduced with our *Sal-Armoniack*, and then turn'd to Aſhes again and reduced, which muſt be repeated till the greater part of the Tin be turned to *Scoriæ*, and the Gold and Silver melt down to a *Regulus*, which being teſted, leaves behind the Gold and Silver which was in the Tin, and the remaining *Scoriæ*, or Droſs, are of greater value than the Gold and Silver it ſelf. For he who knows to make uſe of theſe Fæces as a Magnet to attract the Gold from metalline Solutions, will get great profit thereby; the ſaid Fæces being a main cauſe of my publiſhing this Treatiſe, becauſe of their great and profitable uſe both in Phyſick and Alchymy; foraſmuch as with their help not onely Gold and Silver, but alſo true Univerſal Tinctures may be extracted from Stones and Metals: So that he who knows the uſe of theſe Jovial Fæces may not onely richly maintain themſelves, but alſo liberally communicate to the Poor. If God continue my life, I intend to undertake this profitable Work my ſelf, and thence make ſome proviſion for the Poor; for I have already taken my leave of this wicked World, expecting with patience an heavenly Guide to conduct me to life eternal, which I earneſtly pant after.

A Corol-

A Corollary, *or Supplement to the foregoing* Appendix.

WE have ſeen in the foregoing Treatiſe, how with the help of Lead, the Gold and Silver which is hid in Tin may be extracted with our Secret *Sal-Armoniack* ; which after it has ſeparated the ſaid Gold and Silver, doth ſtill retain great virtues, as being become a true natural Magnet, able without much trouble or fire, to extract not onely from Gold, but alſo from the groſs bodies of Iron and Copper their pureſt Tinctures, which in them are better, and in greater quantity than in Gold it ſelf. Which Solar Magnet few Philoſophers have known, or the uſe of it. Our *Coſmopolita* writes moſt clearly of the ſame in the following words: *There is a Steel which can extract from the Rays of the Sun, that which many have ſought and not found.* And again, *If our Steel copulate eleven times with Gold, the Gold thereby becomes weakned almoſt to death, and the Steel will conceive and bring forth a Son more famous than his Father. Nuyſement* alſo ſpeaks of this Magnet, but ſparingly and darkly, and *Paracelſus* yet more obſcurely. Others who had the knowledge of it, make no mention thereof at all ; fearing, 'tis like, leſt the Art might grow too common, and be proſtituted thereby : but without cauſe ; for though a Man be able to extract the Tinctures of Metals, yet hath he not therefore the whole Art: for though the ſaid Tinctures be of great uſe for the cure of all diſeaſes, yet can they not diſplay their virtues upon Metals, till they be fixed with Gold, and have obtained metallick ingreſs : but in Phyſick, as was now ſaid, they are very uſefull, before their fixation, and eſpecially thoſe which by our Magnet are extracted from *Mars* and *Venus*, for they purge all that is hurtfull out of the Body, not weakning as common Purges do, but ſtrengthening it. They alſo purge by Sweat and Urine, and ſtill all inward and outward Pains procure ſweet reſt, by reaſon of the Anodynous quality hid in *Mars* and *Venus*. So that theſe Tinctures of *Mars* and *Venus* before fixation may be uſed againſt all diſeaſes with aſſurance of good ſucceſs ; and when fixed, they turn Silver into Gold. For our Magnet robs the Dragon (*viz. Aqua Fortis*, wherein *Mars* and *Venus* are diſſolved) of the Golden Fleece he is keeper of, and, like another *Jaſon*, brings home the ſame, and with it reſtores his aged Father to youth again, and procures to himſelf vaſt and unmeaſurable Riches. For theſe Tinctures do great wonders in both faculties. It is not long ago ſince I took ſome grains (which I had left of a former preparation) of one of theſe Tinctures, to ſee if thereby I might be ſomewhat refreſhed, which indeed did perform all that could be expected from it, but having no more of it could not perfect my cure. Since which time I have had a great longing with the firſt occaſion to prepare ſome more of it, becauſe I found that upon taking that ſmall quantity, my bald head began to be cover'd with black curl'd hairs, from whence I am verily perſwaded, that had I had more of the like Tincture, it would have wholly renewed me ; and therefore ſhall not be wanting to make uſe of the firſt opportunity to prepare more of it, both for my own health and that of others, and publiſh the wonderfull works of God throughout the whole World. And foraſmuch as God of his free Grace has been pleas'd to bleſs me with the knowledge of this beſt and moſt powerfull of Medicines, though by reaſon of my weakneſs I am forc'd to keep my bed, and muſt patiently wait, till it ſhall pleaſe God to put me into a condition of preparing the ſame ; yea though Death ſhould prevent me from ever doing it, yet ſhall this be my ſatisfaction, that I have here informed the Lovers of Art, what wonder-working Tinctures lye hid in theſe deſpiſed Metals of Copper and Iron, and which may ſo eaſily with our Jovial Magnet be extracted.

But let him that undertakes to work with our ſecret Magnet, take heed that he do not make it too ſtrong, leſt inſtead of a Tincture, he draw the groſs Bodies ; for it often happens when the Magnet is too ſtrong, that, together with the Tincture, it draws the groſs Body, and eſpecially of the Homogeneal Metals, in which the Tincture is ſo cloſely united with the Body, that it is very hard to ſeparate them. A common Magner draws Iron, together with its Tincture, but without ſeparating the one from the other ; but our ſecret Magnet draws from Iron (its Body being firſt opened) the Tincture onely, leaving the groſs Body behind, becauſe Iron and Copper are Heterogeneous Metals, in which the Tincture is eaſily ſeparable from its Body, whereas Gold, which is Homogeneal, doth not readily part with his Tincture, the Body following its Soul or Tincture. Yea a common Magnet draws the whole Body of Iron, without ſeparating the Tincture, even then when by Nature it is made Homogeneal and fixed like Gold : as we ſee in Granat-ſtones, which are rich in Iron (as thoſe are which are brought to us from *America*, and eſpecially from *New-France*, ſome in great pieces and others ſmall like Sand) that they are greedily attracted by the common Magnet : and yet no Iron can be melted from them, foraſmuch as neither Fire will flux, nor corroſive Spirits diſſolve them ; but their Tincture may eaſily be drawn from them according to the way I have ſet down in my Book *of the Three Principles*. In *America* are found great Mountains of ſuch ſmall Granats, which being Homogeneal, will not yield to Fire or Stygian-waters. And now lately I have ſeen ſome Mineral Earths and Stones brought from *New-found-land*, of which there are whole Mountains there, which never any Man that I know could make any profit of, though it be certain that every pound weight of them contains half a Crowns worth of Gold and Silver. But we need not trouble our ſelves to ſeek for Treaſures in other Countries. God having furniſhed all parts of the World (none excepted) with Subjects that afford good and abundant Tincture, onely the Art of drawing them forth is wanting. We do not ſtand in need of Gold for to extract its Tincture, becauſe we may have one as good from *Mars* or *Venus*, and with much more eaſe.

But if any Man has a mind to draw the Gold from ſuch Waters, wherein it is imperceptibly ſcatter'd and diſpers'd, let him put a ſmall quantity of our ſecret Magnet into the ſaid Water, and he will ſee all the ſaid Gold preſently gathered to it, and reduc'd to Viſibility and Corporality, with great profit to the Artiſt. And becauſe many ſuch Waters abounding with Gold and Tincture, are found prepared

pared by Nature to our hands, without charges or trouble, this ſhort information here may to the skilfull open a door to great Treaſures.

But to proceed and ſhew that there are ſuch Magnets wherewith Tinctures may be extracted; and here firſt of all I will inſtance in my Jovial *Sal-Armoniack* here deſcribed, whereby the Tin turn'd to Aſhes is reduced; for when the ſame *Sal-Armoniack*, impregnated with Tin, is diſſolved in Spirit of Salt, it becomes ſuch a Solar Magnet, which can and does extract the Tinctures from the Solution of Metals. For when a little of this *Sal-Armoniack* Water is poured upon the Solution of any Metal, ſhaken together, and ſet aſide, the Magnet, as in a moment, attracts all that's good in the ſaid Solution, whether it be Gold or Tincture, to the bottom of the Glaſs of a purple or blood-red Colour, and the Solution becomes white. And yet there are many Magnets which are better than this of *Sal-Armoniack* impregnated with Tin, extracting the Tinctures from Metals with more eaſe, and better than that. The reaſon why I onely make mention of this, is, becauſe it is the product of the Work here deſcribed, *viz.* the extracting Gold and Silver from Tin. And to the end I may evidence to all, that the ſaid Magnet is of greater value than the Gold and Silver, which is got from the Tin; I ſhall ſay thus much, that it is impoſſible for the ignorant to believe of what great advantage this Magnet is to thoſe that underſtand the uſe of it: for not onely may Univerſal Tinctures be extracted therewith for curing the Bodies of Men and Metals, out of Metals and Stones, and that eaſily and without charge; but it can alſo extract much Gold from thoſe Metals and Stones, in which much volatile and ſpiritual Gold is hid, *viz.* Iron, Copper, *Eaſt-Indian* Zink, *&c.* and amongſt Stones the red and yellow Pebbles, which are almoſt every-where to be found. Concerning which extraction of *Sol* from Sand and Stones, I have treated at large in my Seventh Part of the *Proſperity of Germany*. Now that our Magnet draws to it all Colours and Tinctures, not onely from Stones and Metals, but from Vegetables and Animals, and doth highly exalt the ſame, may thus be proved: Diſſolve one ounce of Gold in *Aqua Regis*, pour the yellow Solution into a pound of common Water, and this yellow Colour will no more be perceived, then pour alſo ſome of our Magnet into the ſaid Water, and all the Water will become blood-red, and being ſet aſide, the Gold, which the Magnet hath attracted, falls to the bottom, highly exalted in Colour, and the Water remains white, having loſt all its Gold, and may be uſed again for the like extraction of Gold or Tincture out of Stones and Metals *in infinitum*, without any impairing of its ſtrength; ſo that I may well ſay, that never hath a more profitable invention been communicated to mankind.

Doſt thou deſire to experience what our Magnet can doe in extracting the Colours of Vegetables and Animals? then proceed thus: Boil Braſile-wood, Turmerick, or any like Vegetables in Water till it be coloured, filter it, and pour a little of our Magnet into the colour'd Water; ſhake it together, and the Magnet will draw all the colour from the Water to it ſelf, which falls to the bottom in form of a very ſubtil Powder; the Water being decanted, and the Powder dried, affords an excellent colour for Painters; Braſile-wood a brown red, Farnabock a light red, Dragon's-blood a bright ruby colour, Turmerick a yellow, and Indigo a curious Sky-blew. Animals, as Cochenille, *&c.* may be proceeded with in like manner, and will afford far better Colours than they can of themſelves, becauſe our Magnet (as hath been ſaid) exalts all Colours whatſoever. To try this thy ſelf, thou mayſt according to my foregoing inſtruction prepare it, and ſo find by experience the wonders it will perform in extracting the Tinctures of Metals, Stones, Vegetables and Animals; which if thou doſt, thou wilt find more than I have here ſet down. And if thou haſt no time to prepare the Magnet thy ſelf, thou mayſt have it of thoſe who prepare it in great quantities: For becauſe this wonder-working Magnet can do ſuch great things, I have communicated the preparation of it to a very honeſt friend, to the end he might make it in quantity, and vend it for the good of the World, at a Rix-dollar *per* Pound. With this Magnet Wool, Linnen, Silk, Bones, Feathers, *&c.* may be dyed or painted far more fair and laſting than any other way now known: Chymical Phyſicians, with the help of it, may prepare the true Quinteſſence of Metals and Stones for the cure of all diſeaſes: and it will aſſiſt the Philoſophers to extract Univerſal Tinctures from all coloured Stones and Metals, with which they may throughly and laſtingly tinge white metals to Gold, and Cryſtal to Rubies, Saphires, Jacinths, Emralds, *&c.* according to their pleaſure.

In a word, he who has this Magnet and knows the uſe of it, needs not to read any Chymical Books for all in all is comprehended in it, as in a ſhort time will be manifeſted. This Magnet is ſo great a Treaſure that the vaſteſt Volumes cannot contain all its virtues, it is ſerviceable to all men; yea no ſubject can be found in nature, that can produce ſuch wonderfull and uſefull effects as this our ſecret *Sal-Armoniack*. Great Books have been written concerning the common Magnet which onely draws Iron, though indeed its nature and properties be alſo very wonderfull; for without it there could be no ſailing by Sea in the Night time, whereas now it is all one to Marriners whether they Sail by Day or by Night: but how much more highly is our magnet to be eſteemed, which not onely points out to Philoſophers, Phyſicians and Chymiſts, the right way through the vaſt and wild Sea of Chymical Operations, to their deſired Port, richly laden with the beſt of Commodities Gold and Tinctures, but alſo directs Mechanicks to new ways and inventions of obtaining wealth, never before known.

Indeed as there is a great difference between *Mars* and *Jupiter*, ſo alſo between theſe Magnets which partake of their natures. The common martial Magnet guided *Chriſtophorus Columbus* to *America*, that new World abounding with Gold and Silver, beſides many other profitable Commodites, but all this in a way hazardous and full of danger, many thouſands having loſt their lives as well by Sea as by Land in endeavouring to obtain theſe riches. For *Mars* with his Magnet onely loads and perſwades to War and Blood-ſhed, whereas the friendly and peace-loving *Jupiter*, with his benign Magnet ſtirs up none to evil but onely to good, and directs us to a Land much more abounding with Gold than *America*, whence we may fetch the ſame in peace and quiet without fear of War or Blood-ſhed, and to the glory of God make known his Works of wonder to the ignorant.

And thus much ſhall ſuffice to have ſpoken concerning the extracting or ſeparating of Gold and Silver from Tin, and the eaſie extraction of Tinctures from Stones and Metals, by means of our ſecret *Sal-Armoniack*. Now for a Surplus, and to pleaſure the Sons of Art, I'll take one turn more in the Philoſophick Garden and gather ſome fair Flowers, to make a Garland in honour of the Adepts, that they may wear it in remembrance of me. The firſt of theſe Flowers is the white Lilly, the ſecond the blew Violet, and the third the deep Purple *Amarantbus*, being the chief that grow in our Garden, of which I intend to twiſt my Garland.

The firſt, *viz.* the white Lilly appears in the beginning of our Work; the blew Violet in the midſt, and the deep red *Amaranthus* in the end of it. That I compare the beginning of our Work to a Lilly, is not without reaſon, foraſmuch as our mercurial Water is whiter than white, being called of Philoſophers a white, whiter than white, becauſe though it be a white colour, yet it excells all other whites, with its gliſtring brightneſs ſo far, that other white colours compared with it look very dim and dark. And becauſe God hath beſtowed upon the Lilly ſuch a fair gliſtring white, as no Flower can compare with it, therefore we compare our mercurial Water (the beginning of our Work) for its unparallel'd whiteneſs to the Lilly of the Field: of which our Saviour himſelf ſaith, *That* Salomon *in all his glory, was not arrayed like one of them*. For this cauſe alſo the Philoſophers always termed the beginning of their Work a white Flower, as appears (among other inſtances) from an inſcription engraven on two Candleſticks, belonging to a Cloiſter in *Weſtphalia*, made by a *Monk* and dedicated to the uſe of the Altar there in theſe words, *Non ex Auro, nec Argento ſed ex primo Artis flore ſum factum. I am not made of Gold nor Silver, but of the firſt Flower of Art.* Theſe Candleſticks are white as Silver, but heavy as Gold; which may paſs for a proof that the white in our work is termed a Lilly or Flower.

And that this our bright white Lilly doth far ſurpaſs all other white Flowers whatſoever, the Philoſophers in *Turba* witneſs when they ſay, our Salt exalts the whiteneſs in Silver and the red in Gold; which indeed is the very truth, though it be not believed by the unexperienced, becauſe at firſt ſight it ſeems againſt nature, that one colour ſhould die both red and white: yet that it is ſo, I here witneſs unto with my Pen, and hope ſhortly to make an ocular demonſtration of it to all that are lovers of the wonderfull Works of God. In the mean time we may prove it thus, diſſolve in *Aqua Fortis* ſome fine cupell'd Silver, and in another Veſſel in *Aqua Regis* ſome find Gold, pour a little of our mercurial Water into each of the Solutions, and the Silver will fall to the bottom white as Snow; yea rather will be whiter than that or any other thing in the World: and the Gold will be precipitated red like blood, and the Stygian Waters are rob'd of all the Gold and Silver that was in them, by the addition of our ſecret *Sal-Armoniack* Water, ſo as not the leaſt grain remains with them. Thus *Perſeus*, viz. the exalted Gold, has deliver'd *Andromeda*, viz. the white exalted Silver, from the Sea-Monſter, *viz.* the *Aqua Fortis*, and taken the ſame to his Wife, that is, radically united with it. And that our jovial *Sal-Armoniack* will do this, I hope e're long to demonſtrate to the lovers of Art.

The Blind World may learn from hence, it was not without reaſon the Philoſophers affirm that their ſecret Salt, exalts the red in Gold and the white in Silver. And that their Salt is a *Sal-Armoniack*, appears from their crying, *O our* Sal-Armoniack *! O our Sea!* for had it been the common, how could they have call'd it theirs? *Turba* ſaith, *If the Almighty had not created this Salt, it were impoſſible to compleat our* Elixir: Which words are alledged by *Arnoldus de Villa Nova*, who ſaith that *Almizadir* (a name the Philoſophers give their ſecret Salt) is a *Sal-Armoniack*, as appears from his own words taken out of his Breviary of Alchymical Books, being a Letter of his to a Pope of *Rome*.

" To the moſt holy Father, e're I acquaint thee " that firſt of all the bodies muſt be reduced to their " firſt matter. To underſtand which, thou muſt " know, that the matter of all Metals, and their " Sperm is a white fume decocted and thickned in " the Bowels of the Earth, by a ſulphurous heat; " and according to the varieties of this Sulphur, and " its quantity in the earth, divers Metals are pro- " duced; the matter of them all being the ſame eſ- " ſentially, and differs onely accidently. Above all " things it is certain, that the Workman can do no- " thing here without Salt, no more than an Archer " can ſhoot without a ſtring to his Bow. *Morienus* " expreſſes this more clearly, when he ſaith, *Take* " *the Phlegmatick and Cholerick, and grind the Sanguine* " *with it, untill it become a tinging Heaven*, &c. The " Phlegmatick is cold and moiſt, *viz. Mercury*, the " Cholerick is hot and dry, *viz. Sal-Armoniack*, " and the ſanguine is hot and moiſt, *viz.* Gold. " Obſerve that *Sal-Armoniack* doth not give Co- " lour, but Ingreſs, and prepares the matter and " purgeth it, and then the Spirit being united with " the Body, it hath ingreſs, and having conjoin'd " theſe, it goes off. For this Salt is an unctuous " fatneſs coagulated by the dryneſs of the fire, of " a hot and ſubtil dry nature, which penetrating " through all parts, diſſolves Bodies, and is the " conjoiner of oppoſites, and of all Spirits with their " Bodies. For this Salt is a volatile Spirit, a gene- " rating Stone, and a helper towards the productio- " on of the Elixir; becauſe if this Salt were not, " the Elixir could never be diſſolved, nor have in- " greſs, neither would one thing be join'd to ano- " ther, or have ingreſs into another. It is volatile, " and yet join'd with Bodies, it is a Body which is " hid in it. And therefore *Avicenna* ſaith, *If you* " *put* it, *viz.* this Salt, *inſtead of Fire, Air, or Sul-* " *phur, you will not err in your work, becauſe it inclines* " *it ſelf to every nature and Almizadir*; that is, Sal-Ar- " moniack *will alone do thy buſineſs*. And in the Book " of Aloms and Salts 'tis ſaid, that *if God had not* " *created this Salt, the Elixir could never be perfected,* " *and the ſtudy of Alchymy would be in vain. He* " therefore *that works without Salt* (as the Allego- " ry of the Wiſe Men hath it) *does not attenuate the* " *dead Bodies in their Graves, and therefore can never* " *expect a reſurrection*, &c.

From this Letter of *Arnoldus* it appears fully, that their ſecret Salt is a *Sal-Armoniack*, though not the common. Concerning which Salt the Philoſophers expreſs themſelves very differently. Our *Coſmopolita* cries out, *O our Sal-Armoniack! O our Sea!* and teaches alſo the preparation of it, though very darkly, where he ſpeaks of the little fiſh *Remora*, of which we are told, that it is able to ſtop a great

a great Ship under Sail in her courſe; and we know our ſecret *Sal-Armoniack* has the force to ſtop the Ships richly laden with Gold and Silver, ſailing in the Sea of *Stygian* Waters, and to lead them whither it lifts; from whence it appears that our Jovial *Sal-Armoniack* is the true *Remora* of the Philoſophers.

I proceed now to the ſecond Flower, *viz.* the blew Violet, which is likewiſe found in our Garden. We have heard how by means of our Jovial *Sal-Armoniack*, the colour of Gold and Silver is exalted, after it hath attracted them out of the ſalt Sea, wherein they were diſſolved. But if the Solutions of both Gold and Silver be pour'd together in one Glaſs, and ſome of our Magnet be put to them for to attract the ſame, then the Gold which before was Blood-red, and the Silver which was ſo white, do together conſtitute a Violet colour, which is the ſecond Flower growing in our Garden.

The third and moſt beautifull Flower of all that grow in our Garden, is the fair Flower *Amaranthus*, which of all other doth longeſt keep its colour: the white Lillies ſhed their Leaves as ſoon as they are ripe, and Violets in a ſhort time wither and loſe their colour; but the *Amaranthus* keeps her colour Winter and Summer. And the ſame may be ſaid of our metalline Flowers, the Silver attracted by our Magnet is the white Lilly, which when joyn'd with our blood-red Gold, produces our blew Violet, and out of this Violet, by means of the Fire, is afterwards produced the fix and permanent *Amaranthus*. When a Philoſopher knows where to find, and how to pluck theſe three Flowers, he may well wear them as a Garland of Honour. Thus much I have added to point out theſe Flowers to the Sons of Art, and to ſtir up a deſire in them to pluck them for themſelves. At the preſent, time doth not permit to add any more, wherefore I hope the Courteous Reader will accept of what he finds here, intending in my third Appendix, God willing, to ſpeak more fully of other like Flowers, which with the help of our ſecret *Sal-Armoniack*, may with more eaſe and in greater abundance be gathered than thoſe now mentioned. I intend alſo therein to treat of a far more profitable uſe of our ſecret *Sal-Armoniack*. For although our ſecret *Sal-Armoniack*, which by manual labour is prepared of two Contraries, *viz.* Oil of Vitriol, Spirit of Salt or other corroſive acid Spirits, and urinous Spirits, be of great uſe for the meliorating of Metals, and the preparing of many good Medicines, yet is all this but Children's play, if compared with what may be done with our moſt ſecret *Sal-Armoniack*, which is not prepared by Art, but created of God, and may be had every where in abundance without money. Yea, the Philoſophers ſay that all men have it, that *Adam* brought it with him out of *Paradiſe*, and after death took it with him to his Grave; which is the conſtant aſſertion not onely of Heathen, but alſo of Chriſtian Philoſophers, who have aſſerted the ſame with many arguments, amongſt whom are *Albertus Magnus* and his Diſciple *Thomas Aquinas*, who were holy and religious men, and therefore very far from obtruding lies upon the World. There are alſo many Writings of unknown Philoſophers, who aſſert, that all both rich and poor, always carry the matter of the Stone about with them, yea, that they bring it with them from their Mothers Womb: which though it may ſound ſtrange to the ignorant, becauſe Man doth not appear in a mineral form, but in Fleſh and Blood, yet ſure it is that the mineral virtue is hid in him, for if it were not ſo *Albertus* could never have found Gold between the Teeth of dead Mens Skulls.

And for a concluſion, I *Glauber* do here proteſt, that this moſt univerſal *Sal-Armoniack* is able to change common Mercury in two or three days time, that it ſhall be no longer Quickſilver, nor whiten *Sol Lune* or Copper, but rather exalt them in their colours, and change them into true Tinctures. This *Sal-Armoniack* alſo has the power to fix (though it be unfixt it ſelf) all volatile Minerals, *viz.* common Sulphur, Mercury, Antimony, Auripigment, Zink, Biſmuth, Arſenick, Cobalt, Galmey, and other ſuch like in twenty four hours, ſo as afterwards they will ſuffer themſelves to be melted, without ſending forth any ſmoak, and may be taken inwardly for the cure of many Diſeaſes, concerning which I intend ſuddenly to give a fuller and further account. And therewith conclude this ſmall Treatiſe of the wonderfull Powers and Virtues of our ſecret Artificial, and moſt ſecret natural *Sal-Armoniack*. The godly and upright will eaſily apprehend what is here written, but the ungodly never. In our third Appendix we intend to enlarge on theſe and the like high Secrets, and declare the further profitable uſe of our Mercury of Tin, as being the onely means, without troubleſome or chargeable labour to obtain to an univerſal Medicine.

The End of the Second Appendix.

THE

THE THIRD APPENDIX TO THE SEVENTH PART OF THE Spagyrical Pharmacopœa.

Wherein is Treated of the Further Uſe of our Wonder-working *Alcaheſt* or moſt ſecret *Sal-Armoniack*. And more particularly, of the way to Extract the Tinctures of Gold, Iron and Copper; as well as of all precious and common Stones; and to introduce the ſaid Tinctures again into other white Metals and Stones, ſo as permanently to colour and meliorate the ſame.

Faithfully Tranſlated out of the High-Dutch *Original.*

Courteous READER,

IN the fore-going Second Appendix *to my* Pharmacopœa Spagyrica, *I promis'd the publiſhing of a Third* Appendix, *wherein I intended to communicate to the Lovers of Art, the remaining Vertues of our* Secret Sal-Armoniack; *but finding that my Candid publication of ſo many great and uſeful Secrets are ſo coldly and careleſly received by an ungratefull World, I have thought good to cover the ſame in ſilence. However that I may not be wanting to contribute what I can in this my Third* Appendix, *for the ſatisfaction of the ingenious Seekers and Lovers of Art, I deſign to conclude my* Spagyrical Phamacopœa *with the Diſcovery of a* Wonder-working new-found-Alcaheſt, *which by its ſurpaſſing Virtues does far excell all thoſe before-mentioned. Which new Diſcovery will without doubt be more acceptable to the Lovers of theſe Secrets, than to Treat further concerning the already Communicated* Sal-Armoniack; *which whoſoever ſhall take the pains to prepare, will find much more than I have ſet down concerning it; and therefore think it not needfull to enlarge any further on that Subject, in the mean time neglecting things of greater and better concern. I ſay better things, becauſe the diſcovering of this* New-found Alcaheſt *will afford more light by far to Seekers, than the former could: For which reaſon I have thought good to ſet all other things aſide, for to Treat of the* Alcaheſt *which has not its like in the Univerſe, as I hope by God's aſſiſtance in this Diſcourſe to make out and demonſtrate.*

Now

NOw becauſe I here write of an *Alcaheſt* or *Wonder-working Sal-Armoniack*, I think it not improper to explain the word *Alcaheſt*, and to make known the meaning and importance thereof, which may help us to diſcover the true Uſe and Vertues of the ſame. Some tell us that the word *Alcaheſt*, is a Corruption of the *German* word *Algeiſt*, that is to ſay, *All-Spirit*, from its very ſpiritual nature, and becauſe it reduces groſs Bodies to Spirit. Others by tranſpoſing of its Letters, make a *Dutch* word of it, importing *haſty or ſwift running, flying*, &c.

Now we know that among all Salts that are in the World, there is none to be found, which in Diſtillation or Sublimation doth ſooner volatilize the moſt ſubtil part of Minerals, Vegetables, and Animals, and carry them over the helm, than a good *Sal-Armoniack*: Wherefore the ſaid Name may well be given to it, by reaſon of its volatilizing all things, and carrying them ſwiftly over the helm.

And foraſmuch as I have already ſpoken cconcerning ſeveral of theſe volatilizing Salts, calling the firſt *Common Sal-Armoniack*, the ſecond *ſecret Sal-Armoniack*, and the third *moſt ſecret Sal-Armoniack*, I find my ſelf deſtitute of a Name by which I might call this my New found *Sal-Armoniack*, except I ſhould give it the name of *Eagles Wings*, which I am the rather inclined to do, becauſe in ſome of my former Writings, I have by way of Alluſion expreſſed the ſaid Volatilizing Salts by the Name of *Wings*, comparing the firſt and weakeſt of them to the wings of a *Dove*, the ſecond to thoſe of a *Raven*, and the ſtrongeſt of all to *Eagles wings*. And ſeeing the *Sal-Armoniack* of which I am now to Treat, is far more powerful than any of them all, I may well give it that name, and the rather, becauſe Antient as well as Modern Philoſophers have given the name of *Eagles wings* to common *Sal-Armoniack*; ſome of them, 'tis like, not knowing of any better. Thus *Paracelſus* ſets down the way of volatilizing his *unripe Mineral Electrum* by means of the Spread *Eagles wings*; and in many other places of his Writings, he calls *Sal-Armoniack* an *Eagle*, becauſe this Salt, of all Salts, as the *Eagle* of all Birds, takes the higheſt flight, and therefore alſo is called the King of Salts.

The *Heathens* attributed a Flying *Eagle* to their cheifeſt God *Jupiter*; and the Holy Apoſtle and Evengeliſt St. *John*, becauſe in his Goſpel he takes a higher flight than any of the other Evangeliſts, is repreſented with an Eagle ſtanding by him, as being his proper Embleme. We alſo find in the Writings of Philoſophers, the word *Eagle* is made uſe of by them to ſignifie any thing which by Art is exalted to the higheſt degree it is capable of; and therefore this *Sal-Armoniack* which in its flight excells all thoſe before ſpoke of, exalting things to the higheſt top of Perfection, may well be ſtyled the *Eagles Wing*. *Pliny* makes mention of a great and monſtrous Bird called a *Griffon*, found in the Eaſtern parts of the World, and of that ſtrength, as to be able to carry away an Armed Man on Horſeback, Horſe and all, to his Neſt: which ſtrong Bird is a good Embleme of the ſurpaſſing force of this our *Eagles wing*, which like the *Griffon* is alſo provided with ſtrong Talons, with which it lays hold on heavy things, and carries them away with it, as we ſhall hear by and by. For every good *Sal-Armoniack* hath theſe two Vertues, of being ſharp and piercing as well as volatile: the ſharpneſs are its Talons, whereby it ſeizeth and lays hold of things; and its volatility, are the Wings with which it carries them away. Now the ſtronger theſe talons, and the larger theſe wings of *Sal-Armoniack* are, the more will thereby be effected: The Common *Sal-Armoniack* is the weakeſt of all, our Secret *Sal-Armoniack* is as ſtrong again, and our moſt Secret *Sal-Armoniack* far excells them both; but this we treat of here, is by much the ſtrongeſt and moſt active of them all, and therefore may well be compared to the King of Birds.

This ſame *Sal-Armoniack* may alſo with great reaſon be called *Lucifer*, as affording a bright-ſhining Light to Chymiſts, whereby they may diſcover great Secrets: For as the bright Morning Star in the Firmament, does go before the *Sun*, and gives notice of his riſing, and therefore is called *Lucifer*, that is the Harbinger or Bringer of Light. And as the ſaid Star doth not only Uſher in the Day, but alſo ſhut the ſame, and bring on the Night, being therefore alſo called *Veſperus*; we ſhall find a fit reſemblance of all this in our Philoſophick *Lucifer*, foraſmuch as the ſame makes known and diſcovers to us, the riſing as well as ſetting of our Spiritual *Sun*, and is a double Key which ſhuts as well as opens.

But to ſhew more particularly that my New found *Alcaheſt* or Spiritual *Sal-Armoniack*, hath this reſemblance with the Morning-Star, *Lucifer*; I ſay, that, as the ſaid Star uſhers in the *Suns* riſing; ſo likewiſe our Sophick *Lucifer* goes before our Spiritual *Sun*, and uſhers the ſame over the Helm. And as the Firmamental Sun, when it riſeth above the Horizon, doth by its Light, and Vital heat quicken, vigorate and refreſh every thing; in like manner our Philoſophical Sun, or Spiritual Gold, when by means of our *Lucifer*, it is brought from under its earth or dark *Chaos*, quickens and rejoices whatſoever is contain'd within the compaſs of our Sophick Heaven.

And as in the Heavens the *Sun's* riſing follows ſoon after the appearing of the Morning-Star, following the ſame, as it were, at the heels; ſo likewiſe our *Lucifer*, when by the Artiſts, She is joyned with the dark *Chaos*, in which the Sophick Gold lies hid, and begins to feel the Fire, ſwiftly comes over (for ſuch is the nature of an *Alcaheſt*) and brings tidings of the Philoſophick Suns riſing, which indeed follows it at the heels. Again, As the *Sun* of the Firmament, leiſurely follows the Morning-Star, not leaping forth all at once; ſo our Sophick *Lucifer* brings over Gold, not all at once, but gently and by degrees, at firſt appearing very little, and afterwards diſcovering it ſelf more and more, till at laſt it ſhine forth in its full Meridian Glory.

Neither ought it to be thought ſtrange, that I compare our *Alcaheſt* to *Lucifer*, our Gold to the *Sun*, and our *Alembeck* or Veſſel to *Heaven*; ſeeing that others have done the ſame before me, and particularly *Hermes Triſmegiſtus* the Father of all Philoſophers, has made uſe of this Allegorical way of expreſſing himſelf in the deſcription of his *Univerſal Tincture*, as may be ſeen in his *Smaragdine* Table at the latter end of *Mirac. Mundi*.

Thus the *Reader* may ſee how the Philoſophers of old took pleaſure to repreſent their high Secrets in Parabolical expreſſions; which may further be traced in *Morienus* his Deſcription of the *Univerſal Tincture*, in *Paracelſus* his Book entitled *Cælum Philoſophorum*, which contains great Secrets concerning the Tranſmutation of Metals, but much in Symbolical, and Allegorical expreſſions.

But to return to our *Alcaheſt*, whoſe name imports a ſtrong Spirit which lays hold of Heavy and fix things carrying them upwards with it ſelf, that is Volatilizing them. The *Eagle*, as a King of Birds, ſeizeth

Hens, Gees, Hares, *&c.* with his Talons, and carries them up to his Neſt; but as for what *Pliny* writes of the *Griffon*, ſeems rather an Allegory than a true Hiſtory, becauſe *Pliny* among other things relates of this Bird, that with her ſtrong Talons ſhe digs up Gold from out of the high Mountains and Rocks, and makes her Neſt with it: Now how improper this is for a Bird to make her Neſt with Gold, and not rather with Feathers and other ſoft materials, is apparent enough at firſt ſight. Wherefore we may ſafely conclude, that the Ancients by this great and ſtrong Bird, have denoted to us a violent and high volatil *Alcaheſt*, ſuch as ours is, which lays hold not only of the Spiritual, but alſo of the Corporal Gold which is in Metals, Stones and Rocks, and plucks up the ſame with its ſharp Talons, and with its ſtrong Wings carries up the ſame to the tops of Mountains, there to make her Neſt. Thus we ſee how this Story may be verified: For indeed the Talons of our *Alcaheſt* are much ſharper, and her Wings much ſtronger, than thoſe of the *Eagle* or *Griffon*; for when we pour the ſame upon any colour'd Metals or Stones in a Glaſs placed in a heat of Sand, it preſently lays hold of them, and digs up not only the fix Gold that is in them, but alſo all their fix and volatile Tincture, and carries it to the top of an high Mountain, that is the head of the *Alembeck*. Nor doth it only exert its power upon imperfect Metals, or upon Sand and Flints, which are of a Diſſimilar and Heterogeneous nature, and therefore more eaſily ſeparable, but ſhews forth alſo its ſurpaſſing ſtrength, upon fix Gold and hard precious Stones, which are Homogeneous and of very difficult Separation, penetrating their compact and ſhut-up Bodies, drawing from them their fixed Tinctures or Souls, and carrying them up to the tops of *Olympus*. Neither doth it only extract Tinctures from diſſolved Metals and powdred Stones, but alſo from thoſe that are whole and entire, robbing them of their Tinctures without deſtroying the frame and figure of their Bodies, which indeed is wonderful. And as it thus extracts theſe Tinctures, ſo it can wonderfully introduce the ſame again into other hard and compact Bodies: All which it performs by reaſon of its ſurpaſſing ſubtile and piercing nature; as being neither Earth, Water, nor Air, but a meer Fire, penetrating all things, and which nothing can withſtand or reſiſt.

Take this inſtance of it; Fill a Glaſs-body with Earth, Water, or Air, and you'll find that none of them will be able to penetrate the Glaſs, but put Fire into it, and it will pierce the ſame without the leaſt reſiſtance. Wherefore the Philoſophers ſpeaking of our Secret Fire, ſay: *Our Fire is ſtronger than the Common, becauſe it turns Gold that is moſt fix into a meer Spirit, which common Fire can no way perform.* All men know that Gold cannot be deſtroyed by any common Fire, whereas our ſecret Fire carries over Gold in form of a Spirit, as if it were a volatile Mercury: Judge then whether this be not a wonderful Fire, which as it were in a moment, makes fix Gold ſpiritual and potable.

We read in the Scriptures, that the *Iſraelites* forced *Aaron*, in *Moſes*'s abſence, to make them a Golden Calf for to Worſhip; and that when *Moſes* was come down from the Mount, and ſaw the Children of *Iſrael* dancing about the Golden Calf, *his anger was kindled againſt them, and burning the Calf with fire, he ground it to powder and ſtrewed it upon the water, and made the Children of Iſrael to drink of it*, Exod. 32. 19, 20. Now whether it was by Art, or by the immediate power of *God* that *Moſes* ſo burnt the Golden Calf, that the *Iſraelites* could drink it down, we will not now diſpute; thus much we know, that it could never be done with common Wood or Coal fire. Beſides, we know that *Moſes* was not defective in any thing of Art or Knowledge, as having been educated and inſtructed in the Royal School of *Pharaoh*, in which true Philoſophy, Aſtronomy, Magick, Alchimy, and Phyſick at that time greatly flouriſhed. We read of the Holy Apoſtle and Evangeliſt St. *John*, a thing no leſs ſurprizng and wonderful, *viz.* that he turn'd Rods to Gold, and common Stones into Gems, which he diſtributed to the Poor; as is expreſt in the *Latin* Hymn the *Roman* Church ſings in honour of that Evangeliſt, on the Feſtival-day appropriate to him. I am not ignorant that ſome are of opinion that St. *John* could never do this by art, becauſe he did not make uſe of the proper matter for Tranſmutation, but by the immediate power of *God*, which I will not now determine; only this I can ſay, and if need were, make an Ocular demonſtration of it, that out of Wood, and other Vegetable and Animal ſubjects, none excepted, good Gold, abiding all proofs may be made, though with more eaſe out of one Subject than another. For indeed the Principles of Metals are as well to be found in Vegetables and Animals as in Minerals, though ſomewhat more remote and inviſible, than in theſe. That Wood contains a Sulphur like to that which is found in Metals, none can deny, and I have demonſtrated in many places of my Books; neither is it deſtitute of *Mercury* and *Salt*. Wherefore I here openly profeſs, by an impulſe from *God* and Truth, that it is no hard thing for me, out of all Vegetable and Mineral Subjects to make good Gold, by means of our fiery maturating Spirit, to which in this Treatiſe I have given the names of *Alcaheſt*, *Eagles wings*, *Griffons talons*, and *Lucifer*.

The Ancient Philoſopher *Artephius*, has not ſpecified the time, in which his Secret fire can maturate the true ſubject of the Stone, and bring it to perfection. *Pontanus* ſaith it may be done in a ſhort time, and with ſmall charges. 'Tis probable that *Moſes* ſcarce ſpent one day in burning the Golden Calf with the Sophick fire; neither is it likely that St. *John* made any long work, of changing Wood into Gold, and common into precious Stones. If *Miriam*, *Aaron's* Siſter, could in three days time compleat the Philoſophers Stone from beginning to end, (according to the Teſtimony of Philoſophers) why may not there ſuch enlightned Perſons be found at this day among good Chriſtians that can do the ſame? The ſame *God* who gave this knowledge to *Moſes* and *Miriam*, as alſo to the Evangeliſt St. *John*, he lives ſtill, and ceaſeth not by his Holy Spirit, to enlighten his Elect, without any Verbal Diſputes, reading of Books, Labour, Wearineſs, or Charges, in all Divine and Eternal, as well as Temporal and Natural things, and to lead and conduct them to their deſired end. Wherefore all ought in the firſt place to beg of *God* his Light, Underſtanding, and Wiſdom, as *Salomon* did, and not to ſeek after vain and periſhable Riches, by which means they would obtain much more than they ever can by their own willing and running. I *John Glauber* affirm it boldly, that with our ſecret Fire, I can in the ſpace of three hours, make pure natural fix Gold to be as volatile as any Spirit of Wine can be; and again in twenty four hours-time, turn the ſaid ſpiritualized and exalted Gold, into a fix tranſparent, ſpiritual, ſweet, tinging Carbuncle: and this in the way of Nature, to the wonder and aſtoniſhment of the ignorant Covetous Children of this world, that walk in darkneſs;

and

and yet (as *Chriſt* ſaith) are wiſer in their Generation than the Children of Light.

Let this ſuffice what we have here ſpoken concerning the power and great vertue of our *Alcaheſt*, in preparing of Medicines and Univerſal Tinctures, *viz.* that whatever Metals, common or precious Stones, are put into it, it immediately does volatilize the ſame, and brings them over the helm, carrying them upwards, to what height we pleaſe; for ſure it is that the higher Metals mount in diſtillation or ſublimation the purer they are. When now ſuch pure and ætherial Spirits, are again fixed, then they are no more groſs Metallick Bodies as before, but Spiritual Bodies, and Bodily Spirits; to the Eye Clarified Bodies, but indeed and in truth Concentred Spirits, which penetrate all hard things whatſoever, paſs through lock'd Gates, and take away what pleaſeth them; and as they can without opening the door take out any thing, ſo can they in like manner bring in the ſame again. As for inſtance, I draw the Colour from Gold, and introduce the ſaid Tincture into Silver, being a fix pure and white Body, in which this Metalline Spirit takes up its abode; and the pure body of Silver greedily attracts the Tincture, becauſe ſhe ſtands in need of it; neither indeed can the porous body of Silver, reſiſt or keep out this piercing Spirit, but paſſeth through warming and tincturing her throughout, and filling her pores with Solar Tincture, communicates to her not only the colour and weight, but alſo the nature and property of Gold.

Take another Example: Extract with our *Alcaheſt* by Diſtillation the fix Tincture out of Granates (not pulverized, but whole as they come to hand, and that for reaſons hereafter mentioned) which extraction may be performed in half an hours-time, becauſe our *Lucifer* can paſs through ſhut gates. When now thou haſt caught this Tincture in our Helliſh Spirit, then thou haſt it at command, and it muſt obey thee. If then our fiery Magnet be able to extract the Tincture from hard Stones, without breaking, or deſtroying their bodies, it can as eaſily introduce the ſame again into any hard, white ſtony body, and colour the ſame, light or deep, as pleaſeth thee beſt. For inſtance thou draweſt the colour from Granates, which indeed do ſuperabound with tincture, which renders them opacous, and therefore leſs eſteemed; for we find that a Ruby being of a lighter colour, that is leſs abounding with Tincture than a Granate, is much more valued, whoſe Bodies nevertheleſs do in all things exactly reſemble one another, differing only by reaſon of more or leſs Tincture. Indeed where the bodies differ in hardneſs and clearneſs, there the caſe is alter'd; but when the body is fixe, and can endure the fire, onely 'tis darkened by too much Tincture, this may eaſily be mended by art, onely by extracting or taking away ſome part of its Tincture, which will render it of a brighter colour. Which extraction of Tinctures, and the introducing of them again into pale or white bodies, may be practis'd upon all precious Stones, and to very great profit. For example, I draw, by means of our ſecret fire, the Tincture out of Gold or Granates, and Introduce the ſame into another white Stone, which muſt be fix, that is, ſuch an one, which when made red hot, doth not become ſoft or fall to ſhivers, but retains its former hardneſs, as all thoſe do which are called precious, becauſe the fire can neither conſume nor ſeparate their parts, ſuch as are Diamonds, Rubies, Granates, Saphires, Hyacinths, Emralds, Topaſes, Chryſolites, Amethiſts, *&c.* All which are coagulated of one and the ſame water, and tinctured with the ſame colour; for though their colours differ, that proceeds only from the greater or leſſer quantity or purity of their Tinctures, their colours, as well as their bodies proceeding from one principle. And the ſame muſt be underſtood of all Metals; for Gold has no better original than Iron or Copper, ſave only that by long diſtillation in the Earth, it is better purified and ripened. Obſerve only that in this operation you do not take Criſtals, Beryls, or any other Stones which grow ſoft and crumble to pieces when they are made red hot.

Some Jewellers know with the help of Fire, to mend ſome precious Stones whoſe colours are not bright and clear enough: thus they burn away the colour that is in Saphires and Amethiſts, making them white like Diamonds, their colours being volatile, and therefore may be taken away by Fire, but they can not introduce other colours inſtead of thoſe they have rob'd them of. Neither are they able to burn yellow Diamonds to a whiteneſs, notwithſtanding that Art has been much ſought after: But our *Alcaheſt* can eaſily perform this Maſter-piece, for as much as it, like a ſubtil piercing fire, can paſs and repaſs through ſhut doors without impediment, whereas all groſs, corporal things are fain to ſtand without. For which reaſon I have given our ſecret Fiery Spirit, the name of *Lucifer*, of which *Artephius* ſpeaks thus: *Our Fire is moiſt and dry, it pierces all things, diſſolves, volatiliſeth, and alſo fixeth them; it is natural, unnatural, and ſupernatural:* For though Nature make Gold and Precious Stones in the Earth, yet doth it not afford us ſuch a ſupernatural Fiery Spirit or Stone with which we at our pleaſure can make Gold and Precious ſtones of Earth. Therefore it is Art that brings things higher and further than Nature can, and yet the Artiſt cannot go beyond Nature, except he have firſt learnt to know Nature and taken his Principles from her. Now we know that Spirits, whether they be hot or cold, light or dark, good or evil, are of more power and efficacy than groſs Bodies, for which reaſon God, who is Light and Life, and his Adverſary Satan, who is Death and Darkneſs, have ſo great power: Though indeed the Darkneſs hath no more power than the Light allows or permits it to have: For the Light rules over the Darkneſs, ſo as the Darkneſs can do nothing againſt the Light, of which matter I intend, *God* willing, to Treat further in my ſecond and third Purgatory.

In the mean time we have here ſhewed, how by Art ſuch powerful Spirits may be prepared, as can effect things ſupernatural; for which reaſon, amongſt others, I have given our *Alcaheſt* the name of *Lucifer:* for *Lucifer* was in the beginning with *God*, an Angel of Light, whereas now he is caſt into utter Darkneſs; ſo likewiſe our Incomparable Wonder-working *Alcaheſt* in its firſt preparation, is a bright Fiery Spirit of Light, but after its coagulation, it becomes a ſpirit of Cold and Darkneſs, binding all volatile Spirits, whereas before it made all fix things volatile and ſpiritual. Which that I may more fully evidence to the Ignorant and Incredulous, I ſhall give an Inſtance thereof firſt in Gold, and then in Precious Stones.

A PRO-

A PROCESS,

To draw the fix Tincture from Gold, and to make it Spiritual and Potable, fit for the Phyſicians *uſe, and that eaſily, in a ſhort time, without any conſiderable Charges; and how the ſame exalted Spiritual Gold may be changed into a clariſied, tranſparent, tinging, fix Carbuncle.*

TAke of the filings of Gold, or beaten Gold an ounce and half, or an ounce and quarter, put it into a little, but ſtrong Glaſs body, pour upon it two or three ounces of our beſt *Alcaheſt*, fit a head to it, cloſing it well with a paper dipt in Oyl, apply a great Recipient, and lute it very carefully, for when the Spirit comes over, it paſſeth with great violence, and ſearches every where for vent, being the moſt ſubtil of Spirits, and very fiery withall: Wherefore take great care that your Lute be good, or elſe you will never be able to retain this Corroſive fiery ſpirit. The Veſſel muſt ſtand in Sand, and a very gentle Fire adminiſtred at firſt, that our ſecret ſpirit may by degrees grow warm in the Glaſs, and not be too ſuddenly heated, for in that caſe it would be apt to fly away without its prey: But if you proceed, as is directed, then our moiſt fire will lay hold of the Gold, and carry it over in form of a Spirit, but leiſurely and by degrees, at firſt only of a yellow colour, which afterwards comes higher and higher. Towards the latter end the fire muſt be encreaſed, till the bottom of the Glaſs be red hot, at which time the heavy ſpirits will come over, bringing the heavy Corporal Gold over with them, a red fix ſalt ſtaying behind, which is of great uſe in Phyſick and Alchimy, as we ſhall ſee hereafter. The yellow ſpirit, as well as the red ſalt, may, without any further preparation be uſed outwardly and inwardly (the ſtrength of them being qualified with Water, or other Liquors) and by reaſon of their aſtringent property, corroborate the Stomach of ſuch as are old and cold, procure Appetite, conſume tough Phlegm and ſlimy Matter in the ſtomach, help Concoction and ſtrengthen the Heart, Brain, and all outward and inward parts of the Body; open all Obſtructions, by reaſon of the fiery ſubtil ſaline ſpirit joyn'd with them, penetrating and cleanſing the whole Body, and perform all that can be expected from a true Potable Gold.

But in order to our Metallick Tranſmutation, this Solar ſpirit muſt be reduced to a fix, ſweet, tranſparent, and all-penetrating Stone; the way and manner of doing which, we ſhall declare hereafter. Now in caſe we would have this our Golden ſpirit, to produce more wonderful effects in Phyſick, as well as in the Tranſmutation of Metals, then proceed thus: Take of Gold one part, of the Martial *Regulus* of Antimony two parts, melt them together, pour them forth, and the Gold will be white and brittle; pulverize the Maſs, and put it into a ſmall Glaſs body, and pour upon it three times as much of our fiery *Alcaheſt*, and by degrees abſtract the ſame, and you'll have a higher and better Tincture than from the Gold alone. For *Antimony* is the *Aries* of the Chymiſts, wherein *Sol* hath its exaltation. This red Oyl of Gold and Antimony, may eaſily be changed into an Univerſal Medicine or Tincture, by means of our Catholick Coagulator.

And as we have here taught, how Gold, either alone, or with Antimony, may be brought over, the ſame may be ſaid of the Tinctures of Iron and Copper, which have ſurpaſſing Vertues in Phyſick as well as Alchimy.

We proceed now to ſhew how with our *Alcaheſt*, the Tinctures of Common and Precious Stones may be extracted to great advantage. It may be of good profit alſo from hard fix Stones, ſuch as Granates, which have too much Tincture, to extract part of the ſame, by which means of Granates, Rubies may be made, one ounce of which is more worth than 100 *l.* of dark Granates: which extracted Tincture of Granates may afterwards be made uſe of to exalt the colour of Pale Hyacinths, and other white Precious ſtones.

In a word, this art of extracting the colour from Granats, and introducing the ſame into other ſtones, is an excellent, profitable (I had almoſt ſaid Royal) art, which notwithſtanding is ſo little practis'd, by reaſon of the General negligence and ſlothfulneſs of men, undervaluing this excellent art of Fire, tho' more may be gain'd by it than by Merchandize or any handicraft whatſoever. Let him who is a lover of art, ſet upon the work, and try what God will ſend him. It is impoſſible to ſet down all particular circumſtances of the work ſo exactly, but that the unexperienced may after all miſtake. It ſufficeth me that I have faithfully pointed out the right way towards the Land of Promiſe, leaving the reſt to the deſirous and active Traveller.

Thus I have in ſhort words acquainted the Reader, with the way of extracting Tinctures out of Metals and Stones, by means of my New-found Infernal Fire, and that to very great and good purpoſes, both in Phyſick and Alchimy; and will now in favour of Chymical Phyſitians communicate an eaſy way of bringing the pureſt Souls and Tinctures of imperfect Metals, over the helm, with our fiery ſaline Spirit, for the effecting of wonders in both faculties. But before I proceed to the Practiſe of thoſe ſecrets, I ſuppoſe it will not be amiſs if I endeavour to place our *Sal-Armoniack* in a greater Light; for ſeeing by it, all muſt be performed, which is here ſpoken of, it will be needful to know what properly this word imports.

Of the Nature and Property of our New-found Griffons-Claws, *and* Eagles-Wings, *and what incredible things may thereby be performed in* Phyſick, Alchimy, *and other Arts.*

A Good *Sal-Armoniack* muſt have theſe following properties, *viz.* to diſſolve, extract, and to carry that which it hath extracted in diſtillation or ſublimation over with it; and the better it performs theſe, the better is it to be eſteemed. Now whereas common *Sal-Armoniack*, does only lay hold of, and carry over with it, the moſt volatile Sulphur of Vegetables, Animals and Minerals; our ſecret *Sal-Armoniack* does not only ſeize the light

only ſeize the light Sulphur, but alſo the ponderous *Mercury*, and therefore is far more to be eſteemed than the common. But my moſt ſecret natural *Sal-Armoniack*, extracts and carries over from all Metals and Stones their pure parts to admiration: and yet our *Griffons Talons* and *Eagles wings* are much more powerful, as not only ſeizing their prey with greater ſtrength, but alſo carrying it away with them more ſwiftly, and even ſuch pondrous things, which the foreſaid cannot elevate, or take away with them.

Moreover this New-found *Sal-Armoniack* carries over the ſaid Tinctures not coagulated in the form of *Sal-Armoniack*, but all Spirit, as being it ſelf no coagulate, but a ſpiritual *Sal-Armoniack*, and meer fiery Spirit, wherefore alſo it is able to perform ſuch great things. We will now proceed to the Practick part, and ſee whether there be ſuch a wonderful *Sal-Armoniack* in Nature which can perform all theſe ſtupendous effects.

A PROCESS,

To prepare the higheſt Medicine, or Univerſal Tincture for Humane and Metallick Bodies, by means of our fiery Alcaheſt.

Recipe, one or two pound more or leſs of clean Filings of Steel, ſuch as may be had of the Needlemakers, put them into a glaſs body, ſo as they may but take up a twelfth part of it; then pour upon them a well rectified Spirit of Wine, *viz.* to every pound of Filings four or ſix pound of Spirit of Wine. Care muſt be taken that the glaſs-body be capacious enough, elſe, when the Spirit of Wine begins to work on the Steel Filings, it will run over. The Body then being placed in Sand, and the Recipient ready at hand, add for each pound of Spirit of Wine in the Glaſs, one ounce of our *Alcaheſt*, which will acuate the ſpirit of Wine ſo, as to diſſolve the Steel, in which ſolution, the Sulphur of the Philoſophers, or pureſt Tincture of *Mars* is ſet looſe, and immediately received by the ſpirit of Wine, and with it carried up to the Philoſophick Heaven. But becauſe this Soul of *Mars* has not yet obtained to that height of purity which the Philoſopher deſires, therefore it muſt enter his Purgatory, there to put off all Impurities it has brought over with it: that is, the ſpirit of Wine muſt under a large refrigeratory head be burnt away, in which flame the *Anima*, *Mars*, or ſoul of Iron, becomes purified to the higheſt degree, the flame carrying the Tinging Medicine over in form of a pellucid clear Water, which is the true Water of life of the Philoſophers, healing all Curable Diſeaſes, if daily taken in a ſmall quantity. For this Medicine renews the Body of Man, and makes old Age young and blooming again; neither do I believe that a better Medicine can be found in the World than this is: and that becauſe the fix *Mars* with the help of our *Alcaheſt*, is brought to the higheſt degree of ſubtilty, and is afterwards by the pureſt of Fires, yet further purged and exalted. Wherefore alſo like Lightning it pierceth all parts of the Body, opens all Obſtructions, which are the cauſe of Death: And beſides all this, tinges *Lune*, and coagulates Common *Mercury* into fix *Sol*, as I have often tried and experimented my ſelf; for I ſhould be very loath now I am on my Death-Bed, and as it were dying, to expoſe any thing to the World, beſides what Experience has verified to me.

N. B. When firſt I made this Experiment, and was doubtfull as yet whether it would ſucceed or no, I prepared ſome pounds of Martial Spirit of Wine; and though I knew that from ſuch a ſpirit of Wine impregnated with *Mars*, little good could be expected, before the ſpirit of Wine were ſeparated from the Tincture; and that this ſeparation could not be made by any diſtillation or rectification, for that the ſpirit of Wine always carried the Tincture over with it, as Experience the Miſtreſs of Fools taught me: Therefore I caſt in my mind to burn away the ſpirit of Wine, which when I had done, I found all my ſpirit of Wine burnt away, and nothing remaining in the Porringer, only I perceived, that as far as the ſpirit of Wine had reached, it was tinged of a golden colour, higher than that of Ducat Gold. With which Experiment not being fully ſatisfied (though I ſaw that this way it was poſſible to make a true Tincture for Metals) I went further in my ſearch, that I might at laſt be Maſter of ſo great and profitable a Work. I diſpoſed therefore a great glaſs head ſo, as that conveniently I could under the ſame burn away a little diſh or cupfull of ſpirit of Wine, but the Glaſs-head ſoon broke with the flame of the ſpirit of Wine, which ſtill put me upon a further trial, I took a large, broad and deep Pewter diſh, placed it with the brim on three ſtones of an equall height, ſo that I could conveniently ſet under it a little cup with ſpirit of Wine: I filled my Pewter diſh with Water, and then kindled my ſpirit of Wine, to ſee whether any thing incumbuſtible would come over with the flame, and by that time I had burnt away about two or three ounces of Martial ſpirit of Wine, I found that the bottom of my diſh began to drop down a clear liquor, the Tincture of *Mars* and the incumbuſtible *Mercury* and Salt, together with the Phlegm remaining in the ſpirit of Wine, being all condenſed in the form of Common Water. After I had removed the Diſh, and poured out the Water, I found the bottom of the Diſh, the Cup in which the ſpirit of Wine was, and the Silver ſpoon I had ſet under the Diſh, to catch the Water dropping down from it, were all thick gilt.

Having perceiv'd all this, it was eaſie for me to infer, that for as much as Silver and Tin had been gilded thereby, that I was in the ready way of obtaining a true Univerſal Tincture for Men and Metals; wherefore I ceaſed not to contrive night and day, ſome convenient Inſtrument, for catching of the Tincture, aſcending in the flame of the ſpirit of Wine. And ſo at laſt after long ſearch, I had my deſire, being now confirm'd by Experience, that many pounds of ſpirit of Wine impregnate with Tincture, may in one days time be eaſily burnt away, under a Copper-tin'd Head, by which means the Souls, or incombuſtible Tinctures of Metals and Stones are obtained; which Head, or Refrigeratory Inſtrument, I intend (God willing) to communicate in the Sixth part of my Furnaces.

I can aſſure the Lovers of Art, that no eaſier or leſs chargable way can be found than this is, for to attain an Univerſal Medicine or Tincture, for that according to this Proceſs, an Univerſal Medicament may be had in three days time, and with very inconſiderable charges.

I ſhall add one or two Proceſſes more, to ſhew how by means of our fiery *Sal-Armoniack*, high and noble Tinctures may be extracted, out of other Metals and Stones, and ſhall begin with *Venus*.

Copper inwardly is very like Iron, and like it, is dignified with a very glorious Tincture, and by the help of our fiery *Alcaheſt* (proceeding as was ſaid

before of *Mars)* in three days time a true Tincture may be prepared from it for Men and Metals, thus: *Recipe* of the fineſt filings of *Venus*, one, two or three pounds, put them into a Glaſs-body, and for every pound of Filings pour on three or four pound of Alcolized ſpirit of Wine, lute the Helm and Recipient, diſtill in Sand, and the Alcoliſed ſpirit of Wine will diſſolve the *Venus*, vivifie her tinging Spirit, and carry it over the helm, yet not viſibly; but as ſoon as the ſpirit of Wine is kindled and burnt away under the refrigeratory, then the Tincture of *Venus* appears in the form of a deep red Salt: which Tincture performs whatſoever I have before attributed to the Tincture of *Mars*. And in the ſame way a fix Tincture may be had from common Combuſtible Sulphur in three days time, as here follows.

To fix the Common, Combuſtible, Yellow Sulphur in three days time into a red and fix tinging Stone.

THe whole Art of this Royal Work conſiſts only in uniting the ſaid Sulphur with ſpirit of Wine, and then burning it away under a helm; to catch the incombuſtible Heavenly Salt, or Water of Life permanent, which with Gold becomes coagulated and fixed to a Tinging Stone. Which heavenly Salt as ſoon as by the flame it is ſeparated from the Sulphur, is a true Univerſal Medicine againſt all the Diſeaſes of Mankind: but when joined with Gold, it obtains ingreſs and tingeth *Lune*, and coagulates *Mercury* into *Sol*. Now to unite Sulphur with ſpirit of Wine (wherein the whole Art and Maſtery conſiſts) without any Corroſive or *Alcali*, is an eaſie thing, and which I have declared in my late publiſh'd Writings, and therefore do not think it needful to repeat the ſame here. I do not deny, but ſince that time I have found nearer ways to the Buſh, but do not think my ſelf obliged to proſtitute thoſe Diſcoveries to all promiſcuouſly, it being well if I have not ſaid too much already, and told Tales out of the School.

As to the foregoing Operation, it is obvious to conceive that Common Sulphur joined with a dephlegmate ſpirit of Wine, burns much ſtronger, and conſequently with its flame will have a greater force to fix than a Common ſpirit of Wine can. We know that God in the beginning made the whole World of Fire and Water, from whence alſo all other things have their Original: For when Fire and Water, as contraries, work on one another, they always generate a third thing. The Fire, as the Agent, works upon its Patient Water, which action cannot be performed without the Air, nor can the Water without Earth have any Conſiſtence or ſtability to abide the Fires action. For which reaſon it is that we find no Metalline Oare, but only in the Earth, and eſpecially in ſuch Clefts and paſſages of the Rocks and Earth, where a conſtant moiſture trickles down, and whither the Central Fire can have free acceſs, to work upon its proper Patient: From which union of Male and Female Seeds, a third thing muſt neceſſarily be produced. Now if the Sulphur which is the Male, and the Water which is the Female-Seed, be pure, a pure birth proceeds from them, and by the rule of contraries if impure, the production muſt be ſo likewiſe. Thus it appears that the moiſt Caverns, Holes, and Clefts of the Earth, are the fitteſt Wombs for Minerals and Metals. I am not ignorant that Metals may alſo be generated in Sand or fat Earth, eſpecially where the ſame lye moiſt; for when the Demogorgon, or Central Fire, Spirit aſcends from the Center, and meets with a moiſt Sand or Clay, he joins with it, whence it is that oftentimes in Sand and Clay Metals are found, but not in great pieces as in the Clefts of the Earth, but only in leſs and greater Grains, according as the diſpoſition of the place permits, it being notorious that Grains of Metal are oft found in Sand, and waſh'd from it.

That the Subliming Sulphurous Vapor, when it meets with a ſlimy Matter in the Earth, doth unite with, and turns to a Metal, no Man needs doubt of: For I have ſeen many things in the Earth changed into Metalline Sulphurous Flint-ſtones. Thus we ſee that this Sulphurous Vapour readily cleaves to Snails in the Earth, turning them to Flint, of which I have ſeen many, and have ſome with me at preſent. Amongſt other things I have ſeen a Leather Purſe turn'd to Flint, as alſo the Privy Member of a Man, the reaſon of which will be obvious to him that conſiders of it. We know alſo that ſometimes though rarely Metals are produc'd in the Air, and from thence fall down to the Earth, eſpecially Iron in form of ſmall drops, becauſe the Air is not the proper place for the generation of Metals, for as much as they find no reſting place there. Stones alſo are at times generated in the Air, and from thence are caſt down upon the Earth. Thus in the Summer time, when the attracted Sulphur is kindled by the ſcorching beams of the *Sun*, and works on the moiſt Cloud, in a moment Stones are generated, which with Lightning are caſt down thence: Theſe are ſometimes of ſtrange Figures, but commonly are ſhaped like Wedges. I have ſeen one of them that was three-corner'd, and which way ſoever it was turn'd repreſented the figure of a Mans Heart, and had, amongſt other, this Virtue, that it preſerves all thoſe that are in the Houſe where it is, from being any whit terrified with Thunder or Lightning. But of theſe matters I have treated elſewhere, being only mention'd here to demonſtrate that Fire and Water are the Principles of all things; which being granted me, it will not be found ſtrange, that by burning away ſpirit of Wine, a Stone of the greateſt Virtue and Power, *viz.* that of the Philoſophers, ſhould be generated: which I have not only experimented my ſelf, but recommended it to others, who have likewiſe performed the ſame. Now if ſo weak a Fire, as that of Common ſpirit of Wine is, has the Power, by working upon its Patient, as it were, in a moment to generate an Heavenly Salt or Stone; why may not we then ſuppoſe, that when ſpirit of Wine by the union of a pure Sulphur, is made to burn much ſtronger; that this duplicate ſpirit of Wine, will produce a Duplicate *Mercury* or Cœleſtial *Salt?* Yea, ſurely it cannot be doubted but that ſuch a ſpirit of Wine acuated with the pure ſpirit of Sulphur, will not only in burning away afford a better *Mercury*, but alſo in greater quantity than any ſpirit of Wine alone can, becauſe the incombuſtible *Mercury* and *Salt* in *Sulphur*, becomes meliorated by the flame of the ſpirit of Wine, and highly exalted in Vertue.

When Sulphur is kindled under a Bell, or other convenient Inſtrument, the incombuſtible ſalt of the Sulphur, mounts with the flame, in the form of a Corroſive Oyl, and is caught and uſed to ſeveral purpoſes. But this ſowr Oyl, may well be compared to unripe Grapes, which being eaten, are hurtfull to the Stomach; but if theſe ſowr unripe Grapes be ſuffered to hang on the Vine till the heat of the *Sun* hath ripened them to a perfect Sweetneſs, then they will cauſe no gripings or flatuoſities, as unripe Grapes do, but afford good nouriſhment to the Body: and when

when the juice of them is by fermentation turn'd to pleaſant Wine, it not only ſtrengthens a weak Stomach, but revives the Spirits, comforts the Heart, ſtrengthens the Brain and all other parts of the Body, makes Men chearfull and courageous, and drives away Sorrow and Melancholly, and in a word, is a cauſe of much good to the ſick as well as ſound.

Now if Common Wine can do all this, what wonders, think we, may then be expected from the fix ſoul of its pureſt Spirit, when by its own proper Agents flames, it is in the higheſt degree purified, and beſides this, united with the ſweet ſoul of Sulphur, and thereby ſtrengthened in all its powers.

That Sulphur in its innermoſt is as good as Gold, none that are knowing in Nature will deny, but this doth not appear till by the flames of ſpirit of Wine it be reduc'd to a ſweet, pleaſant, fix, red tinging Salt, and then you are Maſter of as powerfull a Medicine, as any is in the World. *Lully*, tells us plainly, *Make that which is bitter, ſweet, and you will have the whole Art.* *Baſil Valentine* ſaith, That he who in the Chymical Art, can with ſpirit of Wine dulcifie a ſowre ſpirit of Salt, deſerves to be Knighted for it, as having done a moſt Heroical action; and adds, That with this dulcified ſpirit of Salt, the Tincture of *Sol* may be extracted, which is the very Truth. *Hermes* concludes his Smaragdine Table with theſe words: *Here ends what I had to ſay concerning the Solar Work*; and ſo ſay I too. I have ſpoke plain enough, and now catch who catch can: For I don't think my ſelf obliged not only to catch the Bird for others, but alſo to pluck, roaſt, chew and thruſt it into their mouths.

In like manner, as has been here ſaid of Sulphur, we may proceed with Antimony and Orpiment, for to obtain their Quinteſſences, as alſo with all Vegetables and Animals; with which pure Eſſences great wonders may be performed in Phyſick. Time will not ſuffer me to enlarge on the ſubject, but I intend (*God* willing) ſhortly to publiſh a ſmall Treatiſe of the *Divine Character*, or *Seal of the Deity*, by which the World and all that is in it was at firſt created, and yet daily the Stone of the Philoſophers and many other wonderful things are made, and brought forth a-new from the conjunction of Fire and Water, that is, *Sulphur* and *Mercury*; in which Writing, the true ground of many New Generations, which far ſurpaſs Nature, and are produced by a due combination of theſe two contraries, will be declar'd and laid open.

After the ſame Method, as before mention'd, the Tinctures of other red Metals, Minerals and Stones may be extracted. Only we are to take notice, that when we work upon Stones, 'tis beſt only to make uſe of our *Alcaheſt*, without the addition of ſpirit of Wine, for the obtaining of their Tinctures, becauſe ſtones are not of ſo eaſie ſolution as *Mars* and *Venus*. We may alſo with our fiery *Alcaheſt* extract red Tinctures from White Sand-ſtones and Flints, though not in ſuch quantity as from thoſe that are colour'd, which may eaſily be gueſs'd. Many, 'tis like, will wonder to hear that a red colour may be extracted from white ſtones; but this difficulty will be removed if they conſider, that all Sand-ſtones and Flints are nothing elſe, but an Earthly groſs Sulphur without any *Mercury*. Now we know that Sulphur is a Father of all Metals, and that when *Mercury* and *Salt* in a due proportion is join'd with him, then he makes a Metal. We alſo know that all Sulphur inwardly is red, though it do not appear ſo outwardly till it be joined with Salts. We have an inſtance of this in Lead, in which no redneſs appears at all, but when the ſame is calcined with Salt, its blackneſs is turn'd to a lively red, as may be ſeen in Red Lead. For Fire and Salt have the power to exalt all Sulphurs. Foraſmuch then as the White Flint or Cryſtal has Sulphur in it, as appears from their giving forth ſparks of Fire, when they are ſtruck hard together, in like manner as when they are ſtruck with Steel, which is nothing elſe but a fix Sulphur, that by its proper Agent, which is naturally in it, *viz.* a Vitriolate Salt, with the aid only of outward Fire, may be ripened into a True Tincture. And here I refer my *Reader* to what *Artephius* and *Pontanus* writes concerning their ſecret Fire, for further ſatisfaction.

I have prepared a particular Tincture from a white Sulphur, whereof one part tinged three or four parts of red *Venus* into *Lune*; but when I commit this white Sulphur for ſome time to the Fire, its whiteneſs becomes by degrees changed to redneſs, which then being projected on Copper, gives it the colour of Gold. And if the Tincture be wholly fix, it turns the *Venus* throughout to fix *Sol*, but if it be not yet fix, it can never make fix *Sol*, though it have attained a red colour in the Fire. Foraſmuch then as white Flints are nothing elſe but Sulphur, why may not our Helliſh Fire Spirit be ſuppoſed able to make the ſame Red, as well as the White Metalline Sulphur. I declare it therefore as a certain truth, that all white Sulphurs by means of Salt may be made fix and red; and he who is ſo far advanced in the knowledge of Nature and Art, as to know how to apply to every Agent its proper Patient, will eaſily obtain his deſires without any extraordinary charge or trouble, and in a ſhort time, for without the joining Actives with Paſſives underſtandingly in weight and meaſure, no good can be done.

A PROCESS.

To Extract a Red Tincture out of all White Flints, and bring it over the Helm by means of our Fire Spirit, and afterwards to fix the ſame.

Recipe one, two, or three pounds of finely powdred White Flints, and pour upon them half as much of our Helliſh-fire-ſpirit, abſtract the ſame in Sand by retort, and it will carry the pureſt ſulphur of the Flints over with it, which may afterwards be fixed with our Catholick Coagulator. And if inſtead of Flints you take a Gold Spar, which beſides ſome fix Gold, contains much that is Volatile, your pains will be better beſtowed. And in caſe you cannot get any of theſe, then take the *Terra Sigillata*, or ſealed Earth of *Sileſia*, in which much volatile Gold is hid; but if you can get the Red Turkiſh *Terra Sigillata* of *Lemnos*, you will have a much richer Tincture, as abounding with a greater quantity of Spiritual Gold, than any of the forementioned. But take heed you be not deceived, for much of that which is ſold for *Terra Sigillata* of *Lemnos*, is nothing elſe but *Bolus Armenus*.

Ovid and others have in their Fables made mention of this Earth, which is ſo rich in Gold under the name of *Vulcan*, whom his Mother after ſhe had brought him forth in Heaven, finding him to be deformed, flung down to the Iſland *Lemnos*, where ſome Apes, that is Philoſophers, who imitate Nature, took and waſhed him, that is, by their fiery Water, took away his ugly and deformed outſide, ſeparating the pure Tincture from the groſs Body, as I have here taught.

The

The Curious who desire to know more of these matters, let them read the experienced and ingenious *Brucescus* his Book of the Tree of Life, who will give them full satisfaction. But if none of all these forementioned can be had, we may make use of Blood-stone, Ruddle, or any other Red Earth that abounds with volatile Gold, of which there is great plenty in most parts of *Germany*. The Red Jasper-stone, Granates, and Yellow Jacinths do also much abound with Tincture. But these and other such-like, I leave to others to find out, for it is impossible for me to mention all. I conclude this little Treatise with this Solemn Affirmation, that it is a very easie thing in a short time, and without any charges, to speak of, to prepare fix Tinctures, from common Metals and Stones. Believe and set upon the Work, and thou wilt find it so indeed.

The End of the Seventh Part.

LIBELLUS IGNIUM,

OR,

Book of FIRES.

In which is Treated of strange and hitherto unknown *FIRES*, to what end they serve, and what great Profit may by them accrue to Mankind.

Translated out of the *High-Dutch*.

Beloved READER,

THat which hath moved me to write this small Treatise of Secret Fires, *with their great Operations, hath been only this,* viz. *Because* God Almighty *hath commanded us not to hide our Talent in the Earth, (like the Unprofitable Servant) but to improve it to the glory of* God, *and the good of our Neighbour. To improve and augment it, as we may see in the* 16. *Chap. of St.* Luke. *Seeing therefore that the most merciful* God, *hath revealed those high Secrets to me, in this my great Age, makes me judge that such great gifts of* God, *have not been discovered for my sake only, who by reason of my great Age have, as it were one foot already in the Grave; but that I might make known such wonderfull Works to the World.*

Of the first Fire, and its Profitable use.

HOw to make a Lamp, which being closed up in a Glass, may be made to burn continually by its own vertue, and give light without any other help.

Of the benefit of this Lamp.

SUch a Lamp may serve all those who love to see light, as the Image of *God*; and may also be very available to those who by reason of continual Weakness are forced to lie much upon their Beds; which they may keep continually burning in their Bed-Chamber, not only because of its clear shining light, which doth neither smoak nor scent, like all other Combustible Lights, which scent is very prejudicial not only to the Sick, but also to the Healthy, because such smoaks offend the Heart and Brain. On the contrary, this Royal Fire is pleasant, strengthening, and refreshing to the Heart and Brain, and its Cotton or Wick is made of incombustible matter, and casts a sweet flavour all over the Room. This secret Fire might also serve the Hermetick Physicians to prepare a Universal Medicine; especially if the sweet refreshing Odour, which proceeds from it in Burning, be received in a Philosophick Receiver, and administred to their Patients, as a great Cordial, renovating, and restorative Medicine.

Although this secret Fire, be of far greater advantage

tage than what hath been mentioned, yet for certain reaſons its further uſe muſt be concealed. This Fire is appropriated to the Elemental Air, ſeeing it hath its own Air in it ſelf, by reaſon of which it burneth in a Glaſs well cloſed, and if touched by the leaſt Air, it extinguiſheth and goeth out, of which you may ſee more in the Fifth Part of my *Pharmacopœa Spagyrica*.

There is another unknown Fire, which is appropriated to the Earth, becauſe it reſembleth a black Earth, and being ſhut up in a cloſe Veſſel of Glaſs, will keep its Fire perhaps to the end of the World, provided there cometh no Air into the Veſſel; but if one would have it a viſible Fire, the Glaſs muſt be broken that the Air may come to it, ſo the matter will preſently enkindle it ſelf by the Air, and in a ſhort time burneth to a coal, yet without flame or ſmoak, and at length is conſumed, and leaves heavy Aſhes behind.

Of the Uſe of this Earthy Fire.

ALthough it may ſeem to many, that this Fire is not fit for any thing, yet I affirm it to be fit for great and weighty matters, which are not fit to mention, much leſs to make known, by reaſon of the abuſe which may be made of it; this Fire being ten times more forcible than Gun-powder. Moreover, it alſo plays its part in the Melioration of Metals, for when this black Earth-fire is fluxed in a Crucible, then poured out, and expoſed to the Air, it begins to move, and grow as it were living, ſo that one may ſee how, forcibly it attracteth the Air, fills it ſelf with puffing Bladders like an incenſed Toad, continuing ſuch a motion for the ſpace of three or four days, then the matter falleth aſunder, and there floweth out of it a red firey juice, the remainder is dead and unprofitable.

With this red juice, wonderfull things are to be done in Alchymy, not neceſſary to be mentioned in this place, becauſe it is my deſire onely to make known the Wonders of God. But he that will know more of it, let him read the Fifth Part of my *Pharmacopœa Spagyrica*, treating of the Stone of the Wiſe, where he will find how the blood of this Toad doth in few hours draw the Colour of Gold, ſo that the Body remains white, therefore it may be ſuppoſed to be the Chalybs of *Sendivogius*.

This Fire is alſo made of Steel, for when it is touched with a wet finger, ſparks fly from it, as from a red-hot Iron which a Smith is forging upon an Anvil. But enough at this time of this wonderfull Earth-fire till another opportunity. *Ripley* ſeems to have known this Fire, and of it to have prepared his Univerſal Tincture: his Dream ſounds thus, I have ſeen a red Toad drink ſo much and ſo long of the juice of the Grape, till his inwards did burſt aſunder, *&c.*

The third Secret Fire is appropriated to the Elementary water, becauſe it ſofteneth and diſſolveth all hard Subjects; it alſo radically joyneth the different nature of Metals, into wonderfull tinging Stones. Seeing that this Water-fire is of great vertue to the Metals, both particularly and univerſally, I am reſolved (for brevity ſake) to make known its vertue in a few caſes, the reſt will be known by the diligent. Firſt, this wet Fire hath ſuch great vertue, that it can diſſolve radically the moſt fixed Gold, within the ſpace of twelve hours, as alſo to unite it with *Lune*, to volatiliſe and render it irreducible. Which volatile *Sol* and *Lune* is no more like unto *Sol* and *Lune*, but in colour, eaſie flux, form and weight, appeareth like unto black *Saturn*; therefore the ancient Philoſophers, becauſe of its form and ſimilitude, have called it the black Lead of the Wiſe, and becauſe of its volatility the *Mercury* of Philoſophers; which *Mercury* or black Lead of the Wiſe may be alſo *per ſe*, brought into a true Tincture.

Therefore they have all erred, who have taken *Antimony* for the true black Lead of the Wiſe. He that will know my failings in this matter, let him read the Third Part of my *Pharmacopœa Spagyrica*, where he will find Wonders, eſpecially how I have cleanſed it to the higheſt degree, and concentrated it into a white Mercurial fuſible Stone, which doth ſhew ſuch vertues in Medicine as are to be admired. This white Stone hath ſuch vertue, that it cureth all diſeaſes, if it be held every morning onely a while in the mouth; of which I have treated more clearly in the Fifth Part of my *Pharmacopœa Spagyrica*. This true black Lead, which by this humid Fire, is made of Common *Sol* and *Lune*, hath no equality with *Antimony* nor other common Lead.

What elſe is to be done in the particular Melioration of Metals, doth not belong to this place, but ſhall, by the help of God, be declared elſewhere.

This moiſt Fire hath power to extract all *Sol* and *Venus* out of *Lune*, in few hours, if the *Lune* be firſt granulated, and then put into it, without diſſolving the *Lune*, ſo that the *Lune* remaineth almoſt as fine as from the Teſt. The extracted *Sol* and *Venus* may eaſily be ſeparated from the Water, each by it ſelf, by precipitation, inſomuch that the Water retains its vertue, and there is no loſs either of the *Sol*, *Lune*, or *Venus*. In like manner the allay of *Sol* and *Lune*, by *Venus*, may be extracted with eaſe, in great plenty, and for little charge. Which Secret would be of great uſe to Refiners, or ſuch as have much Gold and Silver to be parted, as in Mines, *&c.*

It is ſufficiently known what great labour and charge is required by the common way of parting Gold, and Silver, and Copper, *&c.* therefore needeth not to be repeated.

Here followeth a ſhorter and eaſier way.

FIrſt, if my impure Gold be in great lumps, I granulate it; but if it be Jewels, Rings, or Chains, I onely neal them, and therewith fill a parting glaſs to the third part, then I pour thereon of my cheap and new-invented *Menſtruum*, ſo much as may ſwim above it a fingers breadth, put a Limbick upon it and ſet it in a Sand-furnace, give fire by degrees till the Liquor boil, and be all gone over the Helm, to a dry Salt. So hath the *Aqua Fortis* in the time of digeſting drawn to it ſelf all the allay of *Lune*, *Venus*, or other impurity, out of the Gold, in form of a green Powder, which remains with the Gold in the Glaſs. When it is cold, I take it out of the Sand, and put in warm Salt water, to diſſolve the extracted *Lune* and *Venus*, that it may be poured out of the Glaſs: which done, I boil it in a Copper Kettle, ſo the Salt-water extracts the *Lune* and *Venus* from the *Sol*, and maketh it fine. I decant the green and thick water from the *Sol*, and put to it in the Kettle freſh Salt-water, and boil it to extract the reſt of the *Lune* and *Venus* from the *Sol*. But if this ſecond Water ſhould yet be green and thick, that is a ſign that there yet

remains more *Lune* and *Venus* with the *Sol*; therefore more freſh Salt-water is to be added to the *Sol*, as before. After boiling, put all the green Waters together, and at laſt pour upon the Gold onely common ſweet water, with which boil the Gold to extract the remaining ſaltneſs from it, which will leave it fine and ſhining in the Kettle, as fine Gold uſeth to be, which is to be ſet upon a ſmall fire to dry, then to be kept as fine Gold. The green Water is to be filtred, ſo the *Lune* will remain behind in the filter, which is to be dried, and mixed with the common fluxing Powder of *Sulphur* and *Nitre*, and being melted will be reduced to the fineſt *Lune*. Boil the green filtred Water in an Iron Pot, ſo all the *Venus* will ſettle to the Pot bottom, which is to be edulcorated with Water, and being mixed with the above-named fluxing Powder, and reduced becometh the fineſt *Venus* that can be ſeen with eyes. By this means I doe not onely find all my *Sol*, *Lune*, and *Venus*, but alſo an increaſe of the *Sol*, the reaſon of which increaſe proceeds from my *Aqua Fortis*, which is a graduating Water, and of a meliorating nature and property: which encreaſe indeed is not over-great, yet it pays for all the charge of Coals and Labour. This work may be performed in the ſpace of twelve hours without any loſs of *Sol* or *Lune*; which differs greatly from the tedious vulgar way of ſeparation, which is very laborious and coſtly, beſides the great loſs of the *Sol* and *Lune*. So that ten Marks may be eaſier ſeparated by my way, than one Mark by the common way.

One great Secret more, above others, which for brevity ſake cannot be all inſerted here, is this. It is well known to all Chymiſts, that all Vegetables, as alſo Animals, by addition of common Water, may be brought to fermentation, and according to every ſubject, a *Spiritus Ardens*, of great uſe in Phyſick, may be diſtilled. But how to make ſuch a ſubtile Spirit out of Metals, I never read in any Authour, nor heard of. But I have found out a way by which great matters may be done, which cannot be mentioned here, let others ſearch after it as I have done, it is not good to caſt Pearls before Swine. Yet that the deſirous may know ſomewhat of an Artificial Metallick Fermentation; I ſay that out of certain Salts a Water may be prepared, which when it is put upon a compact Metal, that the ſame by a certain property in the Water, begins to ſwell up and ferment, like to the fermentation of Wine, Beer, or other vegetable Drinks; and after fermentation, by diſtilling in Balneo yields an exceeding ſubtile penetrating Spirit, ſtrong, ſweet, and volatile, according to the nature and property of the Metal; which may alſo by rectification be concentrated and ſubtilized, like that which is drawn from Wine or other Vegetables, without any Corroſion; ſo that ſuch a Spirit may be put into the eye without the leaſt hurt, or ſence of ſharpneſs. [See the Sixth Part of the *Pharmacopœa Spagyrica*.] Therefore it may eaſily be concluded, that ſuch a Metallick Spirit may effectually be uſed in the moſt difficult diſeaſes. But thoſe Spirits are not onely highly profitable in Medicine, but cannot alſo fail to ſhew their effects upon Metals; for I have already experienced thus much, that the Spirit of *Sol* doth in few days graduate Common *Mercury* into *Sol*, in like manner doth the Spirit of *Lune* and *Jupiter* graduate *Mercury* into *Lune*; other Spirits of Metals I have not yet tried. And although many may think to force ſuch a Spirit out of Metals as is drawn out of Vitriol, yet they err, becauſe every Vitriol diſtilled *per ſe* beſides the Phlegm, acid Spirit, and heavy Oil, yields alſo a volatile Spirit, which may be very much ſubtilized by rectification, but it hath no compariſon at all, nor likeneſs with my new-invented volatile humid Spirit of Metals; becauſe the above mentioned volatile Spirit of Vitriol, conſiſteth onely of a ſubtile ſalt Spirit and ſpiritual Sulphur, which may ſufficiently be demonſtrated. For when ſuch a ſubtile ſalt Spirit of Vitriol ſtands a while in a Glaſs cloſe ſtopped, the volatile Sulphur of the Vitriol ſublimeth it ſelf to the top of the Glaſs, and congeals it ſelf in the form of common yellow Sulphur, and the humidity remains in the Glaſs like an inſipid Water, without ſmell or taſt. Therefore the volatile Spirit of Vitriol now-a days prepared, is to be eſteemed for nothing elſe but a volatile Spirit of Sulphur. In oppoſition to which my Metallick Spirits, eſpecially thoſe of *Sol* or *Lune* have no combuſtible matter in them. Alſo the Spirit of Vitriol is yet corroſive, which the Metallick Spirits are not. Therefore let no man think that my invented Spirits of Metals are of the ſame nature with the ſulphureous Spirit of Vitriol, Allom, or common Salt, or the like, but let it be eſteemed as a new-invented high Secret, the like of which was never yet known to the World. He to whom God ſhall pleaſe to reveal how theſe Spirits of Metals may again be brought into fixed bodies, ſuch a one may well eſteem himſelf happy. Seeing that ſuch a Spirit being yet fugitive, can mortifie running *Mercury*, and tranſmute it into *Sol*. Alſo know, that our ſecret Salt water hath power to bring other Subjects into fermentation: As for example; if I was willing to bring Tartar again into fermentation, to try what Spirit it would yield, I diſſolve it onely in fair water, and put to it a little of our Univerſal ferment, ſo will the Tartar preſently begin to ferment and work, and yields a wonderfull volatile Spirit, which is not to be had by any other way. Here I will add onely one thing by way of hiſtory; namely, what happened unto me once, when I joined a little of this ferment with ſome Urine: that the ſame did preſently begin to ferment, and yielded a moſt dreadfull ſcent, ſo that I was neceſſitated to carry the Urine out of the room, the ſmell was ſo offenſive, that it enfeebled my Heart and Brain; and in the diſtilling, yielded a ſcent far worſe than the putrefying of any dead carcaſſes of beaſts, at laſt I forced over all the unpleaſant Phlegm, took the *Caput mort.* out of the Glaſs, and diſtilled out of it a ſtrong Corroſive Spirit, with which I did diſſolve *Sol* and *Lune*. But what is further to be expected from it, time will ſhew me. There came alſo with the ſtrong ſalt Spirit, a red Oil of Urine, not ſtrong.

To enlighten the former diſcourſe, there remains yet ſomething to be ſaid, namely this: That the before mentioned Spirit of Metals may be handled in all reſpects like the burning Spirit of Vegetables, which is diſtilled from Vegetables fermented; in rectifying, the moſt ſubtile Spirit cometh over firſt, and the unprofitable Phlegm remains behind; and the oftener this rectification is performed, it is the more pure, ſubtile, ſtrong and pleaſant, ſo that the vertues of all other Vegetables, ſome of this Spirit being poured upon them and digeſted, may be extracted, and ſeparated from their groſs feces, by ſeparating the Spirit of Wine in Balneo, ſo the vertue of the Herb, Root, or Flower, will remain in the Glaſs; of which one onely drop hath more vertue in Medicine, than a whole handfull of the herb from which it was extracted; yet the Spirit remains good, and is always

proper

proper for the like occaſions. But if one deſireth no Extract, but onely a Spirit of Vegetables, ſtrong and forcible in its operation, then muſt the Spirit be put upon freſh well-ſcented cordial Herbs, Roots, Flowers or Fruits, digeſting them together, then abſtracting the Spirit again, ſo will it be much ſtronger, ſubtiller, and of a more refreſhing ſmell than before. Thus in like manner can we doe with our Spirit of Metals, and make it as ſtrong as we will, by putting the ſame upon freſh Metals, and letting them ferment together, then abſtracting, and ſo fermenting and abſtracting, whereby it always grows ſtronger and ſtronger, ſo that afterwards greater things may be done with it both in Medicine and Alchymy. If then the ſimple Spirit of Metals doth wonders in Medicine and Alchymy, what will not this doe, that hath three or four times its ſtrength? Conſider of it, enough to the wiſe. The Spirit of Metals thus made we eſteem for the true *Aqua vitæ* or *Vinum ſalutis* of the Ancients, and no other made of Vegetables. Take notice alſo by the way, that our Ferment doth not loſe its vertue in diſtilling, but ſerveth always for the like Works, to wit, the Fermentation of Metals.

Seeing that our Ferment is a volatile Salt, after Fermentation the ſubtile Spirit is abſtracted, and the Phlegm received by it ſelf, ſo at laſt riſeth our Ferment with a ſtronger Fire, and leaves the mortified Metal as unprofitable feces. So that the Ferment being once had, it may be often uſed, yet it is ſomewhat diminiſhed every time by ſticking to the glaſſes, yet not being coſtly, the loſs may be eaſily born, ſo that there needs never be no want of it. This is indeed a wonderfull ſubtile metallick Wine, of which I had once a Viſion about thirty years ago (with theſe words: *Ex fece, de fece, debes carpere vinum tuum,*) yet I knew not the ſignification to this time. I have had much thoughtfulneſs about it, yet all in vain, untill God was lately pleaſed to ſhew me the way of preparing ſuch Wine.

If I ſhould write all things which may be done with my new-invented Fermentation out of Vegetables, Animals and Metals, I ſhould have work enough for a great Volume, and as it were bring forth a new World: but let this ſuffice at this time.

Next followeth the fourth Secret Fire of the Wiſe, to perfect an Univerſal Medicine both for Men and Metals.

THat the ancient Philoſophers did make their Univerſal Medicine, not out of one Subject onely, is clearly to be ſeen out of their Writings. And as their Subject was divers, ſo have they alſo uſed ſeveral Fires to decoct their Subject; for ſome Subjects, as fixed *Sol* and *Lune*, they have made volatile by their humid Fire, and again made the volatile fixed by means of the known fire of Wood and Coals. Therefore have they ſo poſitively affirmed, that without common Gold and Silver, no true Medicine for the Metals can be made. And this, by reaſon that other Subjects were yet unknown to them; and they knowing no better, thought theirs to be the onely way by which the Univerſal Medicine could be made. But others have wholly rejected *Sol* and *Lune*, ſaying they are dead, and that one ſhould beware of them; but that their *Sol* and *Lune* were living, and that no commonly known fire could ripen them, that a far other fire is required for that purpoſe; theſe and the like contrary Writings (although they are both true) have confounded the Searchers, ſo that one eſteemeth one Writer, and another, another, and yet are always doubtfull after which Authour they ſhould work. *Pontanus* confeſſeth that he erred two hundred times, although he wrought in the true matter, and ſhould never have underſtood if he had not read the old Philoſopher *Artephius*, and of him learnt the Secret Fire. He deſcribes alſo the Secret Fire in the ſame manner, which *Artephius* doth, to wit, thus: *Our Fire is no Common Fire, it is Artificial to find out, it diſſolves, deſtroys and penetrates all things; it is equal, continual, and conſtant, burning with our Glaſs, and not without*, &c. Our Subject is alſo no common *Sol* or *Lune*, but as yet an unripe Mineral, on which Nature hath but began to operate. All they who have wrought in ſuch unripe *Sol* and *Lune* have alſo of neceſſity known this Secret Fire, or elſe they have failed, and could accompliſh nothing. Some have known the volatile Gold, as alſo the Fire belonging to it, and yet could not come to work with it; the reaſon was, becauſe they as yet wanted the inſtrument belonging to it, becauſe if a volatile matter be to be ripened in an open Glaſs with a flaming fire, it is impoſſible but that the volatile *Mercury* ſhould fly away; and if a Receiver were applied to receive the volatile Spirit, then by that means the Fire would be ſtifled and go out. Here is good counſel at a dear rate, but the diſcovery of the ſecret Veſſel maketh all cheap again; for without the knowledge of this Veſſel, little is to be done. Is it to be an Univerſal Work, ſo muſt it alſo agree with the Univerſal Work of this world? We ſee daily how that the warm Sun cauſing its beams to deſcend downwards upon the Globe of the Earth, cauſeth all Vegitables to grow and multiply, and not onely Vegetables, but alſo Animals and Minerals, as *Plato* witneſſeth in theſe words: *The Sun and Man generate Man.* So that the oftener the beams of the Sun doth draw up the moiſture of the Earth, and let it fall down again in Rain, by ſo much the more it maketh the dry Earth fruitfull, by which means the Fruits of the Earth ſprout forth faſter, ripen, and multiply; becauſe the moiſture when drawn up in the daytime by the Sun-beams, always leaveth behind it its fruitfull Salt, which it had attracted from the Air, in the bowels of the Earth, and is ſtill again impregnated with the influences of the Heavens; for without the Air, nothing can live, encreaſe, or multiply, the which *Hermes Triſmegiſtus* hath very well given to underſtand, when he ſaith all which is above, is alſo below, by which wonderfull things are brought forth; the Sun is its Father, the Moon its Mother, the Wind carrieth it in its belly, the Earth hath conceived it and brought it forth, and is its nurſe, by continual aſcending and deſcending it hath obtained its force, and its vertue is compleat, when it is tranſchanged into Earth, *&c.* Here *Hermes* gives ſufficiently to underſtand, that the volatile matter of the Stone is elevated from the bottom of the Veſſel to the middle region of the Air, and muſt again deſcend to the Earth, that by its continual aſcending and deſcending it may be made to live and encreaſe, as it is in the great World. But how to make this aſcention and deſcention as it is and ought to be done in the Philſophick work, is not permitted

ted to be divulged: but it is more than enough to diſcover and aſſure that in ſuch a ſecret Furnace and hidden Fire, the volatile Gold of the Wiſe may be ripened into a living Medicine. *Amen.*

[Here ſhould come in a ſmall Treatiſe, entituled, *The Explication of* Solomon's *Words*: Viz.

IN Words, Herbs and Stones, there is great vertue. *But who this* Solomon *was, is altogether uncertain; and the Treatiſe it ſelf conſiſting of nothing but fabulous Stories of divers Events, which followed upon the ſpeaking of certain words at divers times, and upon divers occaſions, and containing nothing (as I conceive) that will be uſefull either for a Chriſtian, or an Artiſt, I think fit to leave it out; and more eſpecially, becauſe this Treatiſe is wholly foreign to the Authour's knowledge and experience, but taken upon truſt (as to matter of fact) at random, and from others, which is diſagreeable from all the other Writings of the Authour. All that I think worth the Tranſlating is ſomewhat relating to the Colouring of Glaſs; which take as follows.*

With one pound of pure Glaſs, mix about a dram of the Aſhes of Copper, [or *Crocus Veneris*] and melt them together in a ſtrong Fire, and you'll find a green Glaſs, reſembling the *Onyx-ſtone*. In like manner alſo a whole pound of Glaſs is made like to the faireſt *Saphire*, if a dram of *Cobolt* or *Biſmuth*, melted, be added to the *Scoriæ* or Droſs. Likewiſe one dram of the Ruſt of Iron changeth a whole pound of Glaſs into a yellow Stone, emulating an *Hyacinth*. If one ſhall melt a dram of the Tincture of Gold, or of the Philoſophers Mercury, extracted from Gold and Silver, with a pound of Glaſs, that Glaſs becometh very red, like a *Ruby* in colour, as I my ſelf have found. But if any ſhall be ſo fortunate as to make this Glaſs hard, as well as of a beautifull colour, he will need to take but little pains for his living.

(*There is a ſhort Diſcourſe adjoyned to this, called,* The Quinteſſence of Metals; *but whatſoever is mentioned in that, is contained in the Fifth Part of the* Pharmacopœa Spagyrica, Book of Fires, Book of Dialogues, *&c.*]

The End of the Second Part.

THE THIRD PART OF Glauber's WORKS.

A TREATISE OF THE Three Principles of Metals,

VIZ.

The Sulphur, Mercury, and Salt of Philosophers;

HOW,

They may profitably be used in *Medicine*, *Alchymy*, and other Arts.

Of SULPHUR.

That Sulphur *is one of the Principal Columns of Medicine, and also a Primary Part of the Three Principles of Metals, is more than sufficiently manifest; also, that in it is reconded much good, several Books left unto us (published by Ancient and Modern Authors) do clearly witness. But those Books, for the most part, all of them are obscurely written, and every notable and most remarkable thing is by them both concealed and manifested. Hence it was most usual, of it to prepare certain Vulgar Medicaments; as,* Yellow Flowers, *a* White Magistery, *a* Red Balsom, *and an* Acid Oyl per Campan. &c. *But among all other,* Paracelsus *in Writing hath most clearly unveiled the same; yet so warily, as few could perform the like, although many diligently searched.*

Therefore, since the Writings of this most highly illuminated Man are able to give a good Testimony of Truth to this my Work, I thought it very convenient, to insert a part of the best of his Writings in this small Treatise of mine; whence it will appear, how our Art is carried on and Augmented Yearly. The Words of Paracelsus *are these which follow.*

Of SULPHUR.

GOD hath created *Bitumen*, endued with many rare and admirable Virtues, not only conducent for the necessary use of a *Physician*, willing and ready to heal the *Sick*, but also for the vast Phantasy and Operation of Chymistry. Besides, in it are many other Virtues, which wonderfully discover themselves by *Sulphur*, because it is the true *Bitumen*. Wherefore I thought it worth my while, not only to describe the Medicinal Virtues of *Sulphur*, but also the Chymical, and many other associated Virtues of the same, in every other Profession and Business.

It is to be owned, that many things have been writ of *Sulphur*; but the true Foundation of the true Virtues thereof, hath scarcely yet by any Man been exactly enough touched or proposed. But those Writers are to be blamed, who would describe all things, of which they have no Understanding; because, in so

doing, they did indeed compoſe and preſcribe ſomewhat; but nothing fundamentally, or according to its genuine Diſpoſition and Property, as in Writing and Deſcribing is requiſite. For in truth, they themſelves underſtood not, yet (through their ambitious Haughtineſs) they would compoſe Books, conſiſting of Letters only, without Soul or Spirit. But I, as One experienced, preſent you my Experience of *Sulphur* in all things, *viz.* What *Sulphur* is with reſpect to *Medicine*, *Alchymy*, and all other aſſociated Artifices. Therefore know ye, that in *Sulphur* (but it is in GOD only to hinder) are wonderful, and thoſe ſo admirably famous, Things, as thence the natural Light of Man may derive Cauſe enough for Wonder: Or elſe, (if GOD prohibit not) the Fault is in the Artiſt's handling it; which is a thing very probable. For, when every babling Sophiſter thinks himſelf a Phyſician, and every Finical Fellow will be accounted a Chymiſt; then it comes to paſs, that Arts can never be rightly expoſed to publick view. But howſoever the Matter is, the Foundation lyes here: In *Sulphur* (for either Faculty) are inſited ſo great *Arcanums* and Powers, as almoſt no Man can throughly exhauſt them; and alſo ſo great Virtues, as will cauſe admiration in every Man. For in very deed, according to the Experience of all Men, (in either Faculty) there are ſo many things worthy of Note; becauſe in *Sulphur* is ſuch an Efficacy, as few like unto it are given, nor in *Chymiſtry* and *Medicine* can its ſecond be found. Yet *Ariſtotle* defames that, ſaying, *Tranſmutation of Species cannot be.* But *Sulphur* ſuffers Tranſmutation: Which is ſufficient to prove, that *Ariſtotle* (if he were now living) might be convinced of his Folly, even by Women.

No Phyſician or Chymiſt ſhould convert Sulphur to his Uſes, according as it is found in it ſelf; but ſeparated into its *Arcanum*, and purely freed and cleanſed from all Impurities, until it is ſo purely clean, as its Virtue exceeds the whiteneſs of Snow. *Hyſſopus*, that is, the *Art of Separating*, doth this; it was anciently called *Hyſſopaica*, in Alchymy and every Separation. Yet Sulphur is of admirable uſe for its vulgar Buſineſſes, or common Artifices. Now, that I may more accurately explain ♃ to your Comprehenſion, I will firſt diſtinguiſh it according to its Nature. For it is not produced from one *Matrix*, but from many. Wherefore alſo, it acquires divers Operations, that is, hath in it ſelf various affections, not one diſpoſition only, but peculiar peculiarly. And that the Phyſician may not err, I will here preſent to him the Nature of that Sulphur, which is beſt for his uſe in Medicine; alſo to the Chymiſt, I will exhibit the diſpoſition of that, which is profitable in Alchymy; and laſtly, I will ſhew, how far it is conducent for every common Buſineſs. Therefore the Inſtruction being firſt premiſed, its uſe ſhall be ſuperadded, not only in Medicine and Alchymy, but alſo in other common Vocations; that every Man in his own Operation may know, how to uſe and apply the ſame, without miſtake or Error.

Touching the *Embryonate Sulphur* of Metals, *viz.* what is inviſibly contained in it, thus take it: That ♃ in Diſeaſes doth ſo admirably conſerve and reſtore its own Member, as it manifeſts the Members to ſtand in need of a Mineral Medicament only, and no other. Hence the ♃ of ☉ is conducent for the *Heart*, of ☽ for the *Brain*, of ☿ for the *Reins*, of ♄ for the *Spleen*, of ♂ for the *Gall*, of ♃ for the *Liver*, and ♀ for the *Lungs*.

Alſo there is found a kind of *Embryonate Sulphur* in Wood: But that ♃ is Fire only, which no Man can preſerve in its Life and Eſſence otherwiſe than in the Wood, with which it paſſeth away, and dyes. Such is the ♃ of all things which are Woody, or whatſoever it be, that is plainly reduced by Fire into Aſhes. This ♃ is Vegetable, but not fixed; nor is it conducible for any thing at all, except thoſe things, which are to be prepared by Fire. Now be it known to you all, that that ♃ indicates the Virtues of other Sulphurs, this way: As Fire devoureth all things, ſo every ♃ is an inviſible Fire, which doth inviſibly abſume Diſeaſes ſo, as Fire viſibly conſumes Wood. Wherefore the *Element* of *Fire* is a ſingular *Arcanum* in all Diſeaſes. He that wants this Element of Fire among his Secret Medicines, ought not in any wiſe aſcribe to himſelf the Name of a *Phyſician*; nor can he ſhew himſelf an Expert Phyſician, but is rather an Erroneous Operator, and a Robber of the Sick. Further I ſay, ♃ is the *Element* of *Fire*, and if any one would have it exerciſe the faculties of a Medicine, let him take care to volatilize it ſo, as it may vaniſh like a Flame; that is, let it be ſo ſubtilized, as it may recede from its own Body, and the Body be ſeparated from it: For the Body is not the *Element* of *Fire*. *Sulphur*, rendred thus Subtile and Volatile, is the Conſumer of what is to be conſumed, that is, what is not fixed in Nature, ſo Diſeaſes are not fixed, but the Body is fixed againſt the Element. And the Element of Fire is only adverſe to that, which is not fixed againſt it, that is, adverſe to *Diſeaſes*. Now would *Pſeudophyſicians* ſo order the matter, as our Philoſophy might find place, and receive Encreaſe in the *Schools* of *Phyſicians*, the Trifles and Impertinencies of Humoriſts (who grope in Medicine as a Blind Man, that knows not which way he goes) being totally rejected, many Homicides, daily perpetrated by their Raſhneſs, would be prevented. In the mean while, ſince they are Men of no Conſcience, what can you do, but leave them to their own perverſeneſs? He that is deſirous to act as a true Phyſician, let him ſeek the Virtues of Elements in Natural things; there he will both find the Truth, and a Remedy againſt the Diſeaſes of the Sick.

There is a twofold kind of Embryonate ♃; one fixed, but notwithſtanding made Volatile; the other, pure Fire; that is, one is Living Fire, the other Inſenſible Fire; yet both the Senſible and Inſenſible are exerciſed in like Conſummation; *viz.* one in Wood, the other in Diſeaſes. Every Man, affecting the Health of others, might by theſe few words be ſufficiently inſtructed, if GOD withſtand not his Endeavours; but I judge every Man ſhall not be made Wealthy, becauſe GOD well knows, why he hath given the Goat ſo ſhort a Tayl. For ſince Riches do very often ſeduce Poor Men, cauſe them to put off the Habit of Humility and Modeſty, and transform them into proud and inſolent Animals, therefore it is more ſafe to keep ſilence, and leave every one to his own poor eſtate.

Now know ye, touching *Sulphur* and its Species; what the Nature, Property and Eſſence, of the ſame is. Whoſoever ſhall attempt to deſcribe *Sulphur* in a moſt accurate manner, (as is fit, though not expedient) will have need of abundance of Paper. But for handling ♃, a judicious Chymical Operator and Experienced Artiſt is required; ſuch a one ſhould be very expert and ſolidly grounded in his Art, no Airy Talkative Perſon, whoſe Art conſiſts in Lip-labour only; but one, that proves himſelf an Artiſt by the Labour of his hands: For ſuch a Man will be able to extract from ♃ more wonderful *Arcanums*, than any Man can deſcribe with his Pen. But, he that knows nothing of *Sulphur*, knows nothing at all, nor is it convenient, he ſhould ſay any thing, either in Medi-

cine,

cine, or in Philoſophy, touching any of the Secrets of Nature.

Of the Uſe of this Element *of* Fire, *which* Paracelſus *hath ſo earneſtly commended to all Phyſicians.*

FIrſt, this Tincture of ♃ may be exhibited in all Diſeaſes, for comforting the Brain, Heart, and all the Internal Members of the Body, becauſe it is famouſly ſubtil, ſavoury, and ſweet; and is a Medicine moſt excellent, eſpecially in Affects of the Lungs. Alſo, it is the moſt penetrating of ſalutiferous Balſoms, for curing every Body internally hurt, and for reſtoring all vitiated Members to their priſtine Sanity; in ſo much, as, in this reſpect, you can ſcarcely find any other *Remedy*, ſecond to this in Virtue. Therefore it may very well ſerve inſtead of *Aurum potabile*; but in firey Diſeaſes, it muſt be warily adminiſtred. This Eſſence of ♃ ſtrengthens weak Stomachs, and gets a good Digeſtion. In a word, in all Diſtempers whatſoever, except Burning Feavers, it may be ſafely uſed.

Note: If any one ſhall extract a red Tincture from fixed ♃ rubifyed, he will enjoy a moſt preſent Remedy, not only for Men, but alſo for ſome Metals; namely, for tinging ☽ and ☿ into ☉. This is that, which *Paracelſus* commended to all the Rivals or Sons of Art ſo highly, that I thought I ſhould do very well here to ſubjoyn his own Words, as they are written.

Mortification of *Sulphur* is made, when its combuſtible and fetid Humidity is taken away from it, and the ♃ reduced to a fixed Subſtance, which is done thus.

℞. Common yellow ♃, which reduce to a fine Powder, and from it three times abſtract a moſt ſtrong *Aqua Fortis*; then the ♃ remaining in the bottom, will be of a black Colour. This edulcorate with ſweet Water, and ſo oft diſtil the Water thence, as until the Water come off wholly ſweet, and ſmells not at all of Sulphur. Then take that Sulphur, and reverberate it in a cloſe Reverberatory, like *Antimony*. In Reverberating, it will ſhew it ſelf, Firſt, White; Secondly, Yellow; and Thirdly, Red; as *Cinnabar*. Having brought it to this paſs, thou mayſt rejoyce; for that is the beginning of thy Riches. For this Reverberated Sulphur in Tinging, renders every Silver into the beſt Gold; and the Humane Body into perfect Health, more excellently than can be deſcribed. Of ſo great Virtue is this reverberated and fixed Sulphur, *&c.*

Elſewhere, *Paracelſus* writes of the Tranſmutation of Metals and Gems, thus: As you now have ſeen a very brief way of ſome peculiar Tranſmutations of Metals; ſo here further know ye, touching the Tranſmutations of Gems, that is, of ſmall Stones, that of ſuch Tranſmutations alſo there are various ways, ſome of which notwithſtanding ſeem in no wiſe adverſe to others. For you ſee how potent a Tranſmutation of Gems lyes in the Oyl of Sulphur. Every Cryſtal, that is left in that Oyl for ſome time, is tinged and tranſmuted, and may by graduation with diſtinct Colours be ſo exalted, as to exceed a Natural *Jacynth*, *Granate*, or *Ruby*, *&c.*

Paracelſus here teacheth the fixation of ♃, if a moſt ſharp *Aqua Fortis* be ſeveral times abſtracted from the ſame, reduced to a fine Powder. But that way of proceeding will profit nothing, becauſe the *Aqua Fortis* is not capable of any Ingreſs into the ♃, becauſe that is firſt to be procured by Salts, as we above taught. For then the Artiſt's Endeavour will ſucceed well, and the ♃ in Abſtraction of the *Aqua Fortis* be fixed, and alſo wax white: But Redneſs is afterward given to it in an open Fire, or Fire of Reverberation. And it will never wax red in a cloſe Veſſel, how long ſoever it ſtands in the Fire. And when it is thus Red, every common Spirit of Wine extracts not its Tincture, becauſe it hath not ingreſs into it. But the fixed red ♃ muſt firſt be melted with fixed Salt of *Tartar* in a very ſtrong Fire. That way is given to it ſuch an Ingreſs, as any Spirit of Wine can extract from it its Tincture. For otherwiſe you ſhall labour in vain. *Paracelſus* intended rather to keep this Experiment to himſelf only, than to expoſe it to the uſe of the ungrateful Vulgar Sort. But no Man hath cauſe to wonder, why I now am deſirous to diſcover the ſame openly, ſince I have peculiar Reaſons of this Publication, an account of which I am not bound to render to any Man. It is ſufficient to any grateful-minded Man, that I am willing publickly to diſcover that Secret.

This fixed Tincture of ♃ is in Medicine much more efficacious, than the Element of Fire, deſcribed by *Paracelſus*. For That is only extracted from a Volatile Sulphur; but This is fixed; and is alſo of power ſufficient to cure the fixed Diſeaſes of Men, as well as Metals. The Volatile Tincture, or Element of Fire, as it is called by *Paracelſus*, is otherwiſe alſo famouſly conducent for External Uſes. All affects of the Skin, as Scabs, and the like, are cured by the help of that. Alſo to every Wine it is a preſent Medicine. For if any one put a little of it into a Cask of Wine, the Wine acquires a grateful Taſt and Odour, and will be ſo comforted, as not eaſily to admit of changing or periſhing, as otherwiſe is wont to happen to common Rheniſh Wine. I did indeed, for tryal-ſake, pour ſome of this into divers Wines, and found it ſo in very deed. For I put one or two drops of our Element of Fire into ſeveral open Cups filled with Wine; and I daily obſerved them, until I found, that that Wine, in which none of the Element of Fire was put, did in two or three days contract a ſlimyneſs; but thoſe, in which a little of the Element of Fire had been mixed, ſtood almoſt three Weeks, before they began to contract the like. Which buſineſs of Wine, if any Man well conſider, he may find out the way, how, by the benefit of this Art only, far more eaſily to acquire ſufficient Gain for daily Suſtenance, than otherwiſe by the perillous ways of Merchandiſe. Wherefore, whoſoever is deſirous of enjoying Profit in Wines, let him always take care continually to have ready prepared by him a good *Sal mirabile*, and reduce Sulphur into a red firey Stone; otherwiſe he will loſe his Labour and Coſt, which, by way of Admonition, I was not willing to paſs over in ſilence. Therefore I muſt ſay, with *Paracelſus*, that all thoſe Phyſicians and Chymiſts are not of the beſt Fame, who have the Gift of Glorious Eloquence; but thoſe only, who have learned their Underſtanding by long uſe of Fire; and whilſt elaborating Subjects, to be prepared, do well know, what ſhould be added and ſubſtracted, according as the Operation of every thing requires.

Since we now know, what *Paracelſus* taught touching the fixation of ♃, and alſo the profitable uſe thereof in Medicine and Alchymy; it will in no wiſe be impertinent in this place to inſert, what *Baſilius* hath written touching the ſame; that by his Words every Man may the better diſcern, that my fixation of ♃, which I have deſcribed to be made by the help of *Sal Nitre*,

Nitre, differs not from the Writings of other Philosophers, speaking of *Salt Nitre*. The aforesaid *Basilius*, (who, in many places of his Writings, mentioned the fixation of ♄ by help of *Salt Nitre*, but obscurely enough) among other things, thus writes.

[*Here* Salt Nitre *is introduced, speaking of himself and to himself only.*]

Sulphur indeed is my most mortal Enemy, and he is also my best Friend: For when we both are joyned together in Wedlock, and our Marriage celebrated in Hell, so, as we both sweat well together; then we shall so put off all Impurities from us, as in our dead Bodies may be found the greatest Treasures, and of us be progenited wealthy Children, *&c.* By which words, *Basilius* intimates, that *Salt Nitre*, by the Contact of ♄, is inflamed, and, as by an Enemy, wholly burnt up and reduced to nothing; and therefore is accounted its greatest Enemy. But if *Salt Nitre*, in form of an *Aqua Fortis*, be associated to ♄, and render it fixed and constant in Fire; they then become the greatest Friends, and from them both are procreated Rich Children. Therefore whosoever is desirous to obtain such Children, let him bend all his thoughts to the matter it self, and diligently search; for he may find, if GOD be pleased to indulge him and permit the same.

Whatsoever *Paracelsus* hath here writ of ♄, he hath undoubtedly writ plain enough, so as Credit may safely be given to his Writings. For that what he saith is not from the purpose, *Every Man may be informed by these few words, &c.* Certainly he, had he not dreaded the impiety of the World, would much more evidently have explained this, and by that means he would have helped the Necessity of many; but the notorious Ingratitude of the World deterred the Man.

Also *Paracelsus* admirably discourseth of the *Element* of *Fire*, how excellent a Medicine it is, as I my self have experienced, and shall further in time to come (if GOD permit). In like manner, the same Man makes mention of the noble *Hyssopaick Art*, by the help of which, ancient Philosophers did, with their own hands, make black ♄ white as Snow, fix it, and by the benefit thereof, do great Miracles in Medicine and Alchymy. This Art, (with Grief be it spoken) by the negligence and injury of former times, was gradually lost; which notwithstanding, from the Caves of Silence, and, as it were, lying in Darkness, this my small Treatise will again bring to Light.

The Prophet *David* seems to have some knowledge of this Royal Art; for when he saw his Sins before GOD, had (as it were) contracted the blackness of a Coal, he thus implores the Divine Mercy: *Sprinkle me, O LORD, with Hyssop, that I may be white: for, by thy well-washing of me, I shall become whiter than Snow.* Whence it is sufficiently manifest, that *David* craved not the well known Kitchin-Herb, *Hyssop*, to be washed with, because that could not help him; but he spake Metaphorically, and requested that his Sins (by the great blackness of which, he believed his Soul to be infected before GOD) might be pardoned, and he received into Divine Favour, and never be driven from the face of GOD to Eternity.

Likewise, there is no Community between the black, gross, and combustible ♄ of Wood, and the pure, fixed and incombustible ♄ of Gold: For as long as black ♄ keeps its combustible disposition, it is refused by the other, as abhorring the familiar Society of so stinking and sordid a Guest. But as soon as that *Ethiopian*, by assistance of the most noble *Hyssopaick Art*, shall be washed white as Snow, and rendred constant in Fire, then it is readily received into Communion by the ☉, and of both is made one Tincture, by help of which, other Metals are reduced to the Perfection of Gold; as a little after shall be shewed more at large. Yet I will first briefly note the difference of ♄, according to my Experience; which is indeed not very necessary, because *Paracelsus* hath done it. Nevertheless, I am very willing to subjoyn these few things.

Ancient Philosophers, as often as they in their Writings treated of the Original and Beginning of Metals, placed the Foundation of their Assertion in *Demogorgon*; *viz.* That he was the Grand-father of all Metals and Minerals, who, dwelling in the Center of the Earth, was cloathed with a bright-red Cloak. But properly, *Demogorgon* is the Central Fire continually burning, and a Subtile Spirit of ♄, distilling it self through the passages of the Earth. If this firey Spirit in its ascent finds a Commodious Cavern, or Humid Place, in which it may abide; it is immediately there coagulated into a Mercurial Water, and by the Central Fire's continual Coction, in length of time, ripened into Metals and Minerals. But the ascending Spirit of ♄, which finds no Seat for its Abode, ascends higher and higher, until it comes to the Superficies of the Earth; into which, when moystened with Rain, it thrusts it self; and from the Ground grows upward into the Air, in the form of vast Bushes and Trees; in which Plants and green Trees, is found such a ♄ as is in Minerals; (yet this is not found so fixed, as that in Metals,) because all things in the Bowels of the Earth are generated according to the Influence of the Stars, and there coagulated according to the nature of the place into these or those Metals. Let him, who is desirous to be taught more at large touching these, consult those Philosophers, by whom the same are plainly enough described. If the pleasure of Operating induce any one to set about this Work, he may make choice of the ♄ he judgeth most sutable to his Intention.

Now behold the Method, in which, by the benefit of the most ancient *Hyssopaick Art*, black ♄ is by a dexterous washing turned into white, rendred fixed and constant in Fire, and by Reverberation transmuted into Redness, and thenceforth used as a Medicine of Humane and Metallick Bodies wanting melioration, and that with notable profit.

Here is presented, first, the Method of Washing Black Sulphur *so, as it becomes very White.*

THe worthy *Paracelsus* doth briefly indeed describe the method of whitening and rubifying ♄, but what was most conducent thereunto, he concealed; *viz.* that way of Preparation, without which no *Aqua Fortis* can have ingress for Washing and Fixing. My purpose is in this place, for the sake of the Searchers of Art, to publish this Secret in plain Words. This may be done many ways, as will appear by the following,

℞. One part of the Terrestrial Sulphur of Pit-coals, or of the Vegetable Sulphur of Wood-coals; with which, reduced to Powder, mix two or three parts of our *Sal Mirabile*, prepared of Oyl of Vitriol and Common Salt. Which mixture put into a Crucible, and

and ſet the Crucible covered in a Wind-Furnace for melting. There the *Sal Mirabile*, by its Acrimony, preys upon the ♀, and diſſolves it; and thence makes a *Red Stone*, which, by pouring Water on, you may diſſolve, Filtre, and again Coagulate, into a Red Salt or Stone. And thus the ♀, by help of the *Sal Mirabile*, through one only abſtraction of a ſharp *Aqua Fortis*, will be ſo habile, as it may eaſily be made white with waſhing, and alſo be fixed ſo, as to ſuſtain the force of Fire, according to this following

Proceſs.

℞. Of this Red Sulphureous Salt, ℔ j. and upon it, in a ſtrong Body of Glaſs, pour ℔ iij. of moſt ſharp *Aqua Fortis:* Yet not all at once, but leiſurely, and at times; becauſe the *Sal Mirabile* with the ♀ loſeth its Acidity, and becomes Alcaliſate, and therefore ſo inimical to the *Aqua Fortis*, as it impetuouſly reſiſts the ſame. Therefore let him, that is ignorant of this, be very wary, leſt all that is contained in the Veſſel fly away, or the Glaſs, through too much heat, burſt in ſunder. For this cauſe, proceed leiſurely, and operate according to the Rules of Art, that your Endeavour may be fortunate. For, in a way contrary to this, you can find nothing, but Damage and Trouble. As often as you put in any *Aqua Fortis*, preſently put on the Head, becauſe it will ſuddenly and haſtily fume, and ſo cauſe damage; to prevent which, after I had ſuſtained ſeveral Loſſes, I at length, againſt ſuch Exhalations, found this Remedy.

In the Top of the Alembick I cauſed a ſmall hole to be made, through which I put a little Tunnel of Glaſs, and luted it on. So ſoon as I had put the prepared ♀ into the Body, and luted the Head and Receiver to it aptly, I through that little Tunnel poured at one time two or three * Lotones of *Aqua Fortis*, and preſently ſtopped the Pipe with Paper; then immediately after great Ebullition, (by its own Virtue, without any external Fire) the ſubtil Soul of ♀ aſcended in a red form. Soon after, I poured on more *Aqua Fortis*, and left it to its own operation. This I did ſo long, and ſo often, as until I had put in ℔ iij. of *Aqua Fortis*, upon ℔ j. of the prepared ♀. When you have thus done, you may adminiſter Fire externally to your Matter in the Glaſs Body placed in Sand, for ſo the *Aqua Fortis* will the more virtually act upon the ♀, and will all aſcend red in Colour; but the ♀ will remain with the *Sal Mirabile* in the bottom of the Veſſel fixed, white, and able to ſuſtain the force of Fire ſo, as it ſeems almoſt incredible, that ſuch a Subſtance, eaſie to be enflamed and burnt, ſhould in a few hours ſpace be exalted to ſo great Fixation and Conſtancy. The Diſtillation ended, and Glaſſes cooled, take up the Body out of the Sand, and thence take out the Salt with the fixed ♀; and to diſſolve the *Sal Mirabile* from it, pour on as much Common Water as ſhall be ſufficient. After extraction of the Salt, the fixed white ♀ muſt be dryed, and kept ſufficiently hot in a Crucible in an open Fire, until the ♀ remains fixed, totally white, and able to abide the Examen of Fire. Then is it fit to be reſerved for ſuch Uſes, as you ſhall learn by the following

Note: If the *Sal Mirabile*, together with the *Aqua Fortis*, ſhall be purified, then the fixed ♀, after Edulcoration, will be white as Snow. But on the contrary, if you do not well filtre the ♀ with the *Sal Mirabile*, and alſo cleanſe not the *Aqua Fortis*, the ♀ will not come forth of a Snow-like Colour, as you may eaſily

* *Half Ounces.*

conjecture. Wherefore, whoſoever would have a Snow-white ♀, he muſt warily proceed, and purely operate, in all parts of his Work. In Medicine, and the Tranſmutation of Metals, ♀ deſtitute of whiteneſs, will ſerve well enough; but if you would apply it to ſuch Uſes, as neceſſarily require a Snow-white Colour, you had need to proceed warily, according to the Preſcripts of Art. For it is of great Concern in every Work, to know, whether the fixed ♀ ſhould have a White or an Aſh-Colour; as in the following ſhall be ſhewed more at large.

Moreover, it is highly neceſſary to be known, that that *Aqua Fortis*, which was poured upon the prepared ♀, and ſeparated from it by Diſtillation, is no more to be reputed Common *Aqua Fortis*. For although it aſcends Red, yet that Redneſs diſappears in a day or two, and the *Aqua Fortis* ſhews it ſelf limpid and clear again; in ſo much, as it can ſcarcely be thought by any Man, that any eminent Virtue is latent in that red *Aqua Fortis* changing again into whiteneſs. Which kind of Ignorance did notably hurt me, whilſt I perſuaded my ſelf, that ſuch an *Aqua Fortis* could not be effectual for any other uſe, or for the ſame, again. But afterward, when I was ſeized with a deſire of ſearching, whence that Redneſs ſhould proceed, and why it again diſappeared; I rectified a pound of ſuch *Aqua Fortis*, in a clean Glaſs Body, to know, whether that Redneſs would remain behind, and no other than the *Aqua Fortis* ſimple aſcend; and, by tryal, I found, that no Redneſs would aſcend, but in that Rectification it ſeparated it ſelf from the *Aqua Fortis*, and reſided in the bottom in the form of Powder, white as Snow. Having done this, I tryed, whether the ſame White Powder were fixed, and I found it to be as fixed, as Gold it ſelf; yet had no ingreſs into Metals, but remained like a white Earth conſtant in Fire. Hence I was ſeized with the delight of thinking, what eminent Virtue might be latent in this Snow-like Powder. Wherefore I again and again made like Tryals, and ſtill found the ſame. Whence a great Light diſcovered it ſelf to me, by which I perceived, that in the vehement Action of the *Aqua Fortis*, in diſſolving the prepared ♀, the moſt clean Soul of the ♀ aſcended with the *Aqua Fortis*, yet in a very ſmall quantity: For out of ℔ j. of ſuch ♀, I had not above eight or ten Grains of this Soul of ♀ left behind. Which thing, at firſt, did not pleaſe me very well, becauſe the ſmalneſs of its weight ſeemed of no value with me. But having made a more exact Tryal, I found this Snow-like Powder to be a moſt excellent Medicine in ſeveral Curable Diſeaſes of the Humane Body, and a true Tincture for Correcting Metals; and therefore afterward I eſteemed it far more than before; and this ſo noble white Tincture, I, by the help of Art, united with Gold, (which is a thing not difficult to be done by a skilful man) and ſo found, that this laudable Tincture, although ſo very white, might, with ☉, in a ſmall Fire, be exalted unto Redneſs, and be of more value than all the ♀ remaining; although that is an hundred-fold more ponderous, than this that aſcended. Yet the Uſe and Fruit of Both, we will a little after ſhew more at large.

Theſe may ſuffice to be offered here, touching the way of Whitening, Exalting and Fixing, common, black, filthy, fugitive, and combuſtible Sulphur, till it is able to ſuſtain the torture of Fire. But before we proceed to the Uſe of this whitened and fixed ♀, we will here ſhew certain other ways of whitening and fixing every combuſtible Sulphur.

Another way of Fixing Sulphur.

℞. One, two, or three ℔. of common yellow ♃ reduced to Powder; upon this, in a glazed Earthen Pot, pour four, six, or nine ℔. of a ſtrong *Lixivium*, made of Lime or Wood-Aſhes, in which, you muſt ſo long boyl the ♃ with continual ſtirring of it, as until the *Lixivium* hath diſſolved as much of the ♃, as is poſſible. Then decant it off, and pour on freſh *Lixivium*, that the ſame may alſo diſſolve as much as it can; repeating the ſame Labour till all the ♃ ſhall be diſſolved. Which Solutions, if you filtre and coagulate into a Red Stone or Salt, the Sulphur will be ſo habile, as it may, by the help of *Aqua Fortis*, be waſhed and fixed.

Another way of Fixing Sulphur.

Diſſolve ♃ in a *Lixivium*, and put that Solution in a Glaſs Body, upon which ſet an Alembick, with an hole on the Top to put a Tunnel through, as before ſaid, and adjoyn and lute a Receiver thereto. Then through the Funnel pour in leiſurely and by degrees ſo much Oyl of Vitriol, as until the mortification of both is perceived, no more ebullition is cauſed, but all action each upon other ceaſeth. This being done, adminiſter Fire by degrees, and a ſubtile Spirit of Vitriol will aſcend, which performs wonders in *Medicine* and *Alchymy*; becauſe it contains Spiritual ☉ in it ſelf, and may be very much ſubtilized by Rectification. In Taſte, it differs little from the Taſte of Spirit of Urine; only that it is more grateful to the Palate, and for every Uſe more efficacious than Spirit of *Sal Armoniack* or *Urine*: Alſo from it the Tincture may be ſeparated, as we will ſhew here following.

The Salt, remaining in the bottom of the Glaſs, muſt be taken out, and by fuſion in a Crucible turned into a Red Stone, which ſuffers it ſelf, *per ſe*, to be fixed in the Crucible in a ſhort time. By the benefit of this Sulphur, all Metals may particularly be amended with great profit. If any one purpoſeth to uſe the ſame Univerſally, let him pulverize this fixed Red ♃, and from it extract a blood-red Tincture with Spirit of Wine: For this Tincture is eaſily extracted, and by *Paracelſus* is called, *The Element of Fire*, and was by him highly eſteemed. Undoubtedly the chief Reaſon why this Philoſopher called it *The Element of Fire*, was, becauſe in the Operation he viſibly diſcerned four Elements. For, the Extraction ended, (which may be abſolved in 24 Hours) on the top is a beautiful Red Ruby-like Tincture, under which is a white Liquor, and in the bottom an Aſh-like Earth. The little Skin ſeparating the Tincture from the white Water, is taken for the Air. Therefore this way alternately, the four Elements preſent themſelves to ſight in the Glaſs without confuſion; ſo as although you ſhake them together an hundred times in an hour, yet they will never be mixed, but after that agitation, every of them recovers its priſtine Station. The fruitful Uſe of this *Element of Fire*, ſhall be further ſpoken of afterward.

Note; As we have here now taught the way of waſhing and fixing common Yellow ♃, and the black ♃ of Pit-coals and Wood; even ſo may the ♃ of *Antimony*, *Vitriol*, *Auripigment*, and other Minerals, be whitened and fixed.

But the method, by which ♃ is extracted from Metals and Stones, ſhall (GOD willing) be ſhewed in a peculiar Chapter. In the mean while, here is declared,

The Uſe of our Fixed Sulphur, *and, firſt, in Medicine.*

Firſt, this ♃ whitened by Lotions and fixed, is a moſt excellent *Bezoardick*, and much more ſafe in its Uſe, than the Oriental *Bezoar*, which is ſold indeed for a greater price, yet never diſcovers any viſible and ſenſible Effect. On the contrary, our *Bezoar* deſervedly is preferred before it, eſpecially in the Peſtilence, and all other Diſeaſes, where Sweating is needful.

Alſo, in all Affects of the Lungs, it yields more Comfort and Relief, than all other Medicaments, which are prepared of ♃ not cocted nor fixed, but only crude. Likewiſe, to Men of every Age, whoſe weak Stomachs are proſtrated by an heap of aqueous and viſcous Humors, it is a preſent Remedy; becauſe by its dryneſs it totally abſumes all Phlegmatick ſuperfluous Humidities, and perfectly reſtores the Stomach. What ſhall I ſay? It may in a ſpecial manner be commended, as a Cordial and excellent Confortative againſt the imbecillity of Age. And outwardly, it may ſerve for a moſt excellent Coſmetick; and, in like manner, by the Spagyrick Art, be reduced into an admirable ſweet Oyl, by the benefit of which, the yellow and blackiſh Skin of Women may be tinged with a beautiful white Colour: Not like any other vulgar Coſmetick, which doth indeed whiten the Skin, but that may again be waſhed off with Water; not ſo, I ſay, but in ſuch a manner, as the Skin, thus elegantly tinged, can in no wiſe be waſhed off again. Yet in length of time, that whiteneſs of the Tincture will wear away, and the Skin recover its native blackiſh Yellowneſs: Wherefore it muſt be tinged again, as often as ſhall be needful. Whence it is manifeſt, that ſuch a Tincture is admirably uſeful in beautifying rich Virgins, and curious Matrons.

Moreover, this Oyl of Talk is efficaciouſly prevalent in curing ſuch Affects of the Skin, as are called, *Impetigo's*, *Serpigo's*, and *Lichene's*; alſo Scrophulous Tumors riſing about the Noſe, or in any part of the Face, and proceeding from an Inflammation of the Liver. This Oyl takes away all ſuch cutaneous Vices, and beautifies and heals the deformed Skin, reſtoring it to its native Colour.

The Uſe of the ſame in Chymiſtry.

Fixed ♃, as well in the humid, as in the dry way, tranſmutes imperfect Metals into ☉ and ☽. Moſt readily ♄ and ♀, in the humid way; and moſt eaſily ♂ and ♃, in the dry way. From every ☽ it ſeparates ☉ by fermentation. If it be added to prepared Metals, the ſame Metals diſtilled by Retort give forth from themſelves living Mercury, which permits it ſelf to be fixed with ☉ into a tinging Stone. Whenſoever old *Demogorgon*, or the Grandfather of Metals, through his extream Age, decays in ſtrength, and waxeth bald, he devours his youngeſt Son, whereby he is ſo greatly comforted, as he is able to give to all his Sons and Servants golden Crowns.

Note: You are to underſtand the devouring of the Son to be, when old fixed ♃ ſwallows and devours crude and not fixed ♃, and thereby acquires to it ſelf Flux and Ingreſs, by the help of a certain Miniſter, who moſt diligently watcheth his Sepulchre ſo long, as until Father and Son (or the fixed and fuſible) be mortified, and riſe together renovated.

Alſo

Alſo from our Hoary headed *Demogorgon*, of exact Age, by the addition of other Matters, is made a moſt white * *Amauſum*, in the acquiſition of which, *Goldſmiths* do greatly delight; becauſe they can adorn their Artifices therewith.

**Amill.*

Behold I preſent you the way of Opening and Conſtituting a perpetual Metallurgy of ☉ and ☽.

We above taught, that ♄ (after it is waſhed into a Snowy whiteneſs, and alſo ſo fixed, as it is able to ſuſtain the Examen of Fire) was endued with power of amending all Metals. For the whitened ♄, by Gradation, turns them into ☽, and the Rubifyed into ☉. But here a great Obſtacle is wont to intervene, ſo as this Work of ſo great profit, cannot eaſily obtain its Effect, anſwerable to the Wiſh of every operating Chymiſt; *viz.* becauſe by Fixation the ♄ is ſo totally deprived of its Fatneſs, penetrating Power, and eaſy Flux, as it degenerates (as it were) into a dead Earth, which, *per ſe*, alone loves not to enter into any Metal, but chooſeth firſt to have Ingreſs duly prepared for it by the help of other Fuſibles, ſuch are vulgar, immature, and combuſtible Sulphur, or Antimony; which do indeed penetrate the dead ♄, and render it ſo fuſible, as it is capable of Ingreſs into Metals.

But ſince ſuch combuſtible ♄ or ♂, is ſo very noxious to Metals, as it makes them black, volatile, and brittle, and ſo commonly doth as much hurt as good; therefore we, not approving of ſuch an Ingreſs, endeavoured to find out a better. Indeed, although every ♄ may another way be ſo fixed, and rubifyed, without the help of *Aqua Fortis*, as to retain its own Ingreſs; yet ſuch a fixation (though eaſily done, and requires little Charge) cannot be compleated without a very long time. I intend to deſcribe this way of Fixing; but firſt ſhall be ſhewed the method of procuring a ſafe Ingreſs to this fixed ♄ by a whitening *Aqua Fortis*.

Firſt, we taught, the ♄ was to be reduced by our *Sal Mirabile*, then that a moſt ſharp *Aqua Fortis* was to be abſtracted from it, and after Abſtraction the *Sal Mirabile* to be ſeparated from the white fixed ♄ by common Water, that the ♄ might be dulcifyed and rendred fit for Medicinal Uſes. Now I teach, that the ♄ fixed by *Aqua Fortis* is not to be edulcorated, but the *Sal Mirabile* to be left with it; being that, which prepares Flux and Ingreſs for its penetration into Metals, inſomuch as Neceſſity now urgeth us to ſeek a better Ingreſs, *viz.* this way;

The way of adding to Fixed ♄ a Ferment, by the benefit of which, is acquired Ingreſs into Metals, penetrative, and amending the ſame.

Above, where we treated of the way of fixing Sulphur, we taught, that after it was reduced by *Sal Mirabile*, a moſt ſharp *Aqua Fortis* was to be poured upon it, and thence to be abſtracted, and that in the time of Abſtraction, a little Volatile ♄ would alſo aſcend with the *Aqua Fortis*, whence the *Aqua Fortis* waxed Red, and that ſuch a Redneſs might be ſeparated from the *Aqua Fortis*, in form of a fixed Powder white as Snow, which might be uſed in *Medicine* and *Alchymy* with great profit. Yea, ſuch a fixed ♄ white as Snow, doth not only ſerve for an admirable Coſmetick; but alſo this ſmall Quantity of ♄ deſerves to be highly commended by Phyſicians, as a moſt excellent *Diaphoretick*, the like of which you can no where find. For indeed, Oriental *Bezoar* is not comparable to this of ours. Our *Bezoar* is the true Unicorn's Horn of the ancient Philoſophers. This our Philoſophick Unicorn, is that moſt potent, hoary, and aged, King of the World, who, as ſoon as he hath devoured his young Son, encreaſeth in ſtrength ſo admirably, as he tranſforms his Gray Hairs into Red, and triumphs in his being able to give to all his Servants golden Crowns, and alſo to make them Kings. For he is no more ſuch as he was, *viz. Venom*, or *Black* blacker than *Black*, or a wild and horrible *Beaſt* in the *Wood*, but is changed into our Oriental *Bezoar*, *White* whiter than *White*, Univerſal *Treacle*, *&c.* So great a power doth he poſſeſs, after he hath been prepared according to the Method above preſcribed.

If any one be deſirous to exalt the Faculties of this ♄, he will not loſe his Labour, if before fixation he diſſolve ☉ in *Aqua Regis*, and pour this Solution of ☉ upon the ♄, inſtead of another *Aqua Fortis*; and abſtract it from thence again. For ſo doing, not only the ☉ remains fixed with the ♄, and gives Ingreſs unto it; but alſo the *Aqua Regis*, or Spirit and Salt of the World, with the Snow-like Soul of ♄, will carry with themſelves over the Helm the clean Soul of ☉, and ſo produce a far more excellent Medicine, than if only the Soul of ♄ did aſcend alone; as every Man may eaſily conjecture. But if any one is deſirous to operate better, he may, if he will, diſſolve the Gold alſo in a Crucible, together with the Sulphureous *Sal Mirabile*; and preſently after abſtract from it a moſt ſharp *Aqua Fortis*; which way the ☉ is ſo much the better united with the ♄. Although I could diſcover much more touching this way of Operating, yet ſince (becauſe I have publiſhed already as much as is fit) no Neceſſity obligeth me to ſuch a publication, I will forbear to ſpeak further hereabout.

The way of bringing this fixed Snow-like ♄ to Redneſs, the Laudable *Paracelſus* here teacheth; *viz.* that it muſt be made Red by a flaming Fire. Yet it muſt not be covered (as he mentions) but open: For this way it will wax Red, otherwiſe it would remain White. Now, that ♄, to which you add ☉, needs no Reverberation; becauſe by the ☉ it is turned into a purple Colour, and the ☉ it ſelf, by help of the fixed ♄, becomes irreducible, and paſſeth into Tincture, and ſo needs no further Exaltation. Therefore to whomſoever GOD ſhall be ſo propitious, as to give him this Salt of Metals, together with the knowledge of conjoyning it with the Red Soul of ♄ and ☉ which aſcends, he will ſhew himſelf both in *Medicine* and *Chymiſtry* a principal Maſter: But whoſoever is ſo blind, ignorant, and witleſs, as he cannot diſcern what I have here ſo largely treated of, ſuch a Man aſſuredly labours with an uncurable Blindneſs, ſo as you cannot recover his Health, although you ſhould put double Spectacles on his Noſe. Now to deſcribe the method of fixing ♄ ſo, as it may retain its Ingreſs, wherewith to penetrate into Metals, I purpoſe not in this place; but it ſhall (GOD willing) be deſcribed, where we treat of our Secret *Sal Armoniack*. Here follows,

The way of Preparing a perpetual Metallurgy of ☉ and ☽, by the help of Fixed Sulphur.

Let the Benevolent Reader know, I do not affirm, that all whatſoever I ſhall here write touching the perpetual Metallurgy, I my ſelf have tryed, or took care to ſee elaborated. For the fixation of ♄ hath not been known to me above two or three Years, during which time, I have been for the moſt part diſtempered in my Body ſo far, as I had ſcarcely ſtrength enough to pro-

proſecute my more ſecret *Arcanum's*, which are far more dear to me, than any fixed ♄ can be. Yet, in the mean while, I could not chooſe but employ my Thoughts upon ſuch a Method, which being found, any one might, by the help of fixed ♄, reap a gainful Crop of Fruit from the tranſmutation of Metals.

To accompliſh this, I could find no way more eaſy, than for a Man, of Elixiviat Aſhes (not of Bones, but) of Wood, well ſifted, to make large *Cineritiums* or Teſts, in Iron Molds fit for the purpoſe, and with that Wood-Aſh, mix a ſmall part of the fixed ♄; and then take care to cupellate Silver mixt with Copper, (with the due addition of Lead) according to the common method of Art, upon ſuch Teſts. For thus, the ☽ will be purifyed, and the ♀ and ♄ paſs into the Teſt, as is otherwiſe wont to happen in all other purifyings of Silver. Theſe Teſts, (which you may keep by you, until you have a ſufficient Quantity) in the uſual manner put into a melting Fornace, that in a ſtrong Fire the ♀ and ♄, which paſſed into the Teſt, may co-unite with the fixed ♄, and ſo attract it to themſelves, as they may come forth impregnated with ☽ and ☉. Now if this Coppery ♄ be cupellated on ſuch a Teſt prepared with ♄, the ☉ and ☽ will remain upon the Teſt, and the ♄ and ♀, as happened before, will paſs into the Teſt. And if you again proceed with them as before, infallibly (by ſuch a way of Cupellating) you will, with the help of fixed ♄, from ♄ and ♀ acquire gradually a Quantity of ☉ and ☽ not to be contemned. By this way of Operating, in all thoſe Regions, where Coals are cheap, a Man may get a competent Livelyhood. For although in Cupellating there is ſome loſs of the ♄ and ♀, they turning into *Scoria's*; yet this ſmall loſs, in theſe poor Metals, is nothing, in compariſon of the great Gain, which may be expected from the more Rich. I reckon, this Operation of Cupellating coſts no more than the price of the Coals; for the damage made in ♄ and ♀ is richly recompenſed by the ☉ and ☽ acquired. I was willing to communicate this to the *Lovers of Art*. Therefore, if there be any Curious Refiners, to whom this Proceſs is pleaſing, let them put it to the Tryal; if they will not, 'tis all one to me: For I will make no Tryal in ſuch Works, as require a Man ſtrong and patient to labour in the Fire. In the mean while, I doubt not, but there will be ſome, who will amply encreaſe their Fortunes thereby; upon whoſe Endeavours, I pray for the Divine Bleſſing, and offer to their Conſideration this ancient Proverb, *By Saturn and Mars, by Fire and Art, a Treaſure is found.* *Mars* is fixed *Sulphur*: Much might be ſaid for *Saturn* alſo; but that is not ſo conducent as fixed ♄, which is much purer than rude Iron, as Experience teacheth.

Touching the further uſe of fixed ♄ in the Emendation of Metals, and that in an humid way, by fixing and graduating *Aqua Fortis's*, the Acrimony or Corroſive Power of which, is firſt ſo broken by the help of fixed ♄, as they do not diſſolve, but only penetrate them, and deduce them to an higher degree, and, according to the nature of the ♄, tinge the ſame into whiteneſs or redneſs.

It is known to us, that nothing tingeth but ♄ only; and that, according to its Nature, into redneſs or whiteneſs, both in the humid and dry way. In the dry way, the ♄ muſt of neceſſity be ſo fixed and fuſible, as being caſt upon the Metal in flux, it may penetrate into it, as Oyl into a dry Skin. You have already heard, that in fixation by *Aqua Fortis*, from the ♄ is ſo taken away its Ingreſs, eaſy Fuſion and Metallick Fatneſs, as it rather ſeemeth like a dry Earth, than a Metallick Subſtance; in ſo much, as unto it cannot be procured a ready Ingreſs into Metals, unleſs by ſome ſingular Art and Induſtry. Such an Ingreſs cannot be given to fixed ♄ in a better way, than by Mercurial mundifyed Metals, *viz.* by ☉ and ☽, and indeed ☉ unto Redneſs, but ☽ unto Whiteneſs. If you would proceed more dexterouſly, you muſt legitimately unite fixed ♄ with the Salt of Metals; then will be acquired Ingreſs into all Metals, as hereafter in the Deſcription of the *Salt of Philoſophers* ſhall be ſeen. But if Fortune ſhall ſo favour any Man, as he can find out ſuch a Water, as is endued with the power of diſſolving fixed ♄, he will enjoy ſo potent a Gradatory Water, as will convert black Leprous ♄ into moſt white pure ☽: And not only ♄, but alſo ♃, ♀, and ♂; yet ♄ moſt readily. Touching ſuch a Gradatory Water, (as far as I have learned by Experience) thus take it: Every ♄ whitened and fixed by waſhing amends Metals; but how it ſhould have and acquire Ingreſs into them, is not known. Therefore, as it is the part of Art and Induſtry to procure to fixed ♄ a dry Ingreſs; ſo alſo it is no leſs the Work of Art and Induſtry to convert fixed ♄ into a Water, by which, vile Metals may be exalted to a more excellent degree of Gold and Silver. Therefore, let him, who intends to convert fixed ♄ into Water, obſerve, that this Water muſt not be ſo ſtrong as to diſſolve Metals, but ſavour only of ſo much Acrimony as will be ſufficient to penetrate them, and deduce ♄ into an humid form, *viz.* ſuch as it is tinged with, either white or red, according as the Gradatory Water ſhall be made, either of red or white ♄. Whoſoever well underſtands how to change fixed ♄ into Water, unto him will be opened a Compendious way of Graduating vile Metals into ☉ and ☽. Which Operation is, of all, the moſt commodious for ♄, becauſe *Aqua Fortis* more readily preys upon, and diſſolves, other Metals than ♄. For it is prejudicial to diſſolve any, becauſe in Graduation Metals are not to be diſſolved, but only to be penetrated, with conſervation of their forms, as they were when put in, and, without any diminution, to be tranſmuted into better Metals; which in ♄ is moſt eaſy to be done. Yet any *Aqua Fortis*, although you add to it thrice ſo much common Water, will prey upon and diſſolve ♄, ♃, ♀, and ♂, which is a thing to be ſtudiouſly avoided. Into the aforeſaid Gradatory Water, in which the fixed ♄ is, caſt a little common Salt, then the *Aqua Fortis* becomes Enemy to the Lead, and aſſaults it, but indeed only to penetrate, (not to diſſolve the ſame) and to introduce the fixed ♄. After the Lead hath lain in ſuch Water about 14 Days, it will ſwell and wax white, leaving one half of it ſelf upon the Cupel. But the longer it ſhall lye in the Gradatory Water, ſo much the more amended will it be.

If fixed ♄ could as eaſily be turned into Gradatory Waters, the ſame may eaſily be fixed; aſſuredly in the whole World there would be no one particular more deſirable than this, by the help of which, great Riches might be acquired. For this ſame humid Graduation requires almoſt no trouble or labour, more than putting filed or raſped Lead for ſome time into the Gradatory Water, and after Gradation, to take it out and cupellate it; being ſuch a kind of Work, as by Chymiſts is accounted a Childiſh Labour.

But to know and be able to convert fixed ♄ into a Gradatory Water, is the principal Artifice; and to participate of that, all diligence muſt be uſed by him, whoſoever he be, that is deſirous to reap pleaſant and profitable Fruits from Chymiſtry. What do you deſire? All things needful to be ſpoken, cannot clearly

be

be explained with a Pen; yet if any one ſhall acquire the Salt of Metals, he may eaſily ſo far introduce fixed ♄ into Metals by that, as they ſhall be amended thereby. Hitherto I have plainly enough deſcribed the Fixation of ♄, and prolixly demonſtrated, how ingreſs may be procured to it, as well by the Humid, as by the Dry way. Wherefore, whoſoever ſhall think himſelf concerned herein, let him follow theſe Preſcripts, until he find ſo much Good, as the favour of GOD will grant to him. For the All of our hope depends on the bleſſing of GOD.

In the mean while, I am not willing to conceal from the Searcher of Art, this one only Artificial Manual Compendium, of converting ♄ eaſily into a Gradatory Water. We above ſaid, *Aqua Fortis* could find no ingreſs for it ſelf to the fixing of ♄, before it was procured to it by the help of *Sal Mirabile*. Therefore, ſince the way of preparing *Sal Mirabile* is various, and one Salt is always more conſtant than another; great Caution muſt be uſed, that the Sulphur be ſo handled and accommodated, as it may be ſuddenly diſſolved by the ſharp *Aqua Fortis*, and ſo not be precipitated into a white Powder. For if this be not done, it will indeed be fixed by the *Aqua Fortis*, but become very difficult to be diſſolved. If it be well diſſolved the firſt time, after Fixation it will be eaſily diſſolved. Which is a thing worthy and profitable to be obſerved: For the whole hinge of Art conſiſts here. Therefore, if any one be well Skilled in Spagyrick Labours of Fire, he will eaſily bring this Preſcript to a good Effect; but if he be not ſuch, he will Labour in vain, and loſe his Charges; and that not without the good Pleaſure of GOD, who Wills not, that every Man ſhould be made Rich. Nevertheleſs, if any one, with an indefatigable ſtudy and patience of Search, ſhall hit the Mark, he will give thanks to GOD and to me: If not, let him impute the Error to his own unhappineſs, ſince I have writ ſo openly and clearly, as no Man before me ever did. My purpoſe is in this place to diſcover one moſt excellent Secret; by the benefit of which, fixed ♄ may eaſily be changed into a Gradatory Water, and that the following way.

Chooſe ſuch ♄, as unto which Nature hath given greater Efficacy, than to the common ♄; ſuch, I ſay, as is in a ſort Mercurial, and in which ſuch beginnings of the Operation of Nature diſcover themſelves, as thence may be made a Metal of a Golden Diſpoſition. Such a Mercurial ♄ you ſhall ſcarcely find in all the Metallurgy of Gold; and that naturally Red, both internally and externally; and is otherwiſe called by *Paracelſus Embryonate Sulphur*, or *Cinnabarine Sulphur*, or immature mineral *Electrum*; but by Miners vulgarly called the *Flower of Gold*: Alſo you may perceive it to have a great Communion and ſimilitude with *Auripigment* and *Antimony*. This *Sulphur* is Mercurial, and toucheth Metals with a more near Affinity, than vulgar ſimple ♄, becauſe after Fixation it is eaſie to be diſſolved, and before Fixation better to be wrought upon than common ♄, which partakes of no Mercury. And this ♄ in the abſtraction of *Aqua Fortis* gives forth more of a beautiful Tincture, than any other common ♄. Alſo this pure Soul may much better be uſed in *Medicine* and in *Alchymy*, becauſe it is both Mercurial and of greater Efficacy, than the Soul of any common ♄.

Note: Common ♄ is not ſo eaſily prepared for Solution, as this; becauſe it is Mercurial, and therefore, hath more Communion with *Aqua Fortis*, to be diſſolved by help of it. And after it is diſſolved, in the Diſtillation it gives forth more Soul; and the fixed ♄, which remains in the bottom, is of greater Virtue in *Medicine*, than the other of common ♄. For by how much the more pernicious Venome it was before Fixation, ſo much the more Efficacious *Medicine* doth it become, after the Venome is inverted by Fixation, and converted or prepared into an Antidote or Treacle. Such ♄ may alſo another way, more commodious, than by *Sal Mirabile*, be prepared for eaſie Solution: Which indeed is a thing of great moment, and worthy to be obſerved.

This ſhort, but neceſſary, Admonition I thought good to ſubjoyn for the ſake of the Searchers of Art; to the end it might be known, that one ♄ is better than another for preparing the aforeſaid Gradatory Water. Nevertheleſs, the known common *Sulphur*, as well as that of Wood, is ſufficiently conducible to be waſhed and fixed. More at this time I have not to adviſe. In the mean while, if any one be deſirous to Labour, he may ingeniouſly ſearch out all things fit for his Invention, and earneſtly ſtrive for Riches. For I, without Envy, or cloſe Concealment, have ſo openly ſpoke my mind, as the leaſt blame cannot juſtly be imputed to me. But to prevent the Infelicity of thy Error, my Reader, I could not do better, than I have here done by Writing. Let it not be tedious to Thee to tread in our Footſteps, and in the Footſteps of others, ſo long, as until you can attain to a fortunate and deſirable End; which will Crown your Work: Which Work, by Idleneſs and ſloath, together with ſupine Ignorance, can never be accompliſhed.

Having communicated theſe Gratis, every Man may hence ſatisfie his Deſires ſo, as not to trouble me further with his Inquiries.

A COROLLARY.

WE, in this ſmall Treatiſe, have plainly ſhewed the Way or Method, by which, every black Volatile and Combuſtible ♄ may in the ſpace of one day be converted, by waſhing, into a Snow-like Candor, fixed and rendred conſtant in Fire.

Alſo how, in Fixation, the *Aqua Fortis*, being abſtracted from the *Sulphur*, carries with it ſelf the moſt pure Soul of the *Sulphur*, renders it fixed and durably pernament in Fire; and beſides, that it is not only a preſent Remedy for expelling Diſeaſes moſt grievous in the humane Body; but alſo, that it is endued with the Power of tranſmuting imperfect Metals into ☉ and ☽, yet particularly only, being deſtitute of ſuch ☿, as can ſufficiently extend it ſelf in Efficacy.

Likewiſe we have taught, how to the more groſs part of the ♄, which remains in the bottom, ingreſs may be procured for the amending of Metals with Profit, both in the humid and the dry way.

Laſtly, we ſhewed, how much one ♄ excels another, and ſuch ♄ was to be accounted more excellent which contained in it ſelf pure ☿; and that eſpecially to be the moſt excellent, which before Fixation was judged moſt venemous; and that for this Reaſon, *viz.* becauſe every Supream Venome, after Preparation, will become the higheſt Medicament; and that the Melioration of ſuch *Sulphur* is much more Efficacious, than common *Sulphur*. Wherefore in this place, I am willing, again and again, earneſtly to commend to the

Lovers of Art *Antimony*, Red *Arsenick*, Yellow *Auripigment*, Ash-coloured *Cobaltum*, *Cakimia* and *Zinck*, with *Bismuth*; becauſe all theſe are more excellent than common *Sulphur*. But he, that elaborates ſuch Subjects, ſo venemous, muſt ſtudiouſly beware of the evil Fumes ariſing from them. For as ſuch a Subject before Preparation is mere Venome, ſo, in preparing, its venomous Diſpoſition is more and more increaſed; but after Preparation, that which was deadly, now becomes a moſt Salubrious Antidote or Treacle, and preſent Remedy againſt all kinds of Poiſons.

Note: Whoſoever is deſirous to be ſecurely freed from all Peril, him I would adviſe, to learn the way of fixing ſome common ♄, before he raſhly attempts to invade the Fort of ſuch noxious Venoms.

Therefore, whatſoever we have hitherto taught are not vulgar Matters, or Arts well known before, but merely great *Arcanum's*, and thoſe very lately invented. For, who could believe, that common ♄, a Subſtance eaſily inflameable and burnable, ſhould in one day be ſo fixed, as to be able to remain unhurt againſt all the force of *Vulcan?* Who could have perſuaded himſelf, that the moſt venemous Venoms, as *Cobalt*, *Arſenick* and the like, may in one day be Artificially inverted, and their mortal Venoms converted into Salubrious Antidotes? Laſtly, who could ever have thought, that of the moſt Volatile Mineral Subjects, as ♄, *Antimony*, *Arſenick*, *Auripigment* and others of that kind, in the ſpace of one day may be prepared a Tincture (conſtant in Fire) for humane and Metallick Bodies? No Man, if we had not in this ſmall Treatiſe ſo evidently demonſtrated that, as it may be plainly underſtood. Wherefore, as I have formerly ſaid, ſo I am now ready to affirm, that I, in this ſmall Treatiſe, have revealed ſo great and admirable *Arcanum's*, as no Man (as far as the Memory of Man can tell) hath publiſh'd any thing more clearly than I, touching ſuch Secrets.

If any one is deſirous to Learn, whence ſo ſwift a Fixation of combuſtible *Sulphur*, or ſo ſudden *Metamorphoſis* of moſt deadly Venoms, ariſeth; to him, I will now diſcover the Cauſe. It is ſufficiently manifeſt, that Spirit of *Nitre*, as well as *Aqua Fortis* diſtilled from *Vitriol* and Salt *Nitre*, poſſeſs ſuch a fiery Diſpoſition, by which all combuſtible and Volatile Minerals are ripened. And being ripened, they are alſo fixed; as if fixed things muſt of neceſſity be Mature, and conſequently no more noxious or deadly to Mortals. For whatſoever is rough, crude and immature, the Stomach of Man cannot digeſt, but rejects and caſts out that, (by which it may be injured) as Venome: According as is eaſily diſcerned in all *Cathartick's*, either Vegetable, Animal or Mineral, which, by reaſon of their Crudity, are ſo great an offence to the Stomach of Man, as it frees it ſelf from them, either by Vomit or Seidge. And the more crude and immature Purgers be, the more ſtrongly do they Operate. Hence uſually (by the Preſcript of Phyſicians) Purgers that are too violent, before they be taken into the Body, are amended by Fire. As for Example. *Squills* and *Diagridium*, which too vehemently Purge, are covered over with Dough and baked in an Oven, for correcting the exceſſive Purging property in them, that they may cauſe Evacuations more moderate and more ſafe. *Antimony* immoderately Purging, is excocted, or melted in an open Fire with common *Nitre* and *Tartar*, by which it is ſo far corrected, as it Purgeth without vehemency. The ſame alſo is ſo corrected by Spirit of *Nitre*, as it loſeth its purging Property, and inſtead of its Cathartick Virtue, acquires to it ſelf a *Diaphoretick* and *Diuretick* Property.

Common *Tartar*, taken into the Body, performs the Office of a *Cathartick*: But the ſame, when the ripening Heat of the Sun, in the more hot Regions of the World, hath took from it, its Acidity, and it, in the Fermentation of Wine, becomes a fiery Spirit, it no more exerciſeth a purging Property, but rather hinders Purgers, and ſo amends them, as they cannot Purge with ſo great vehemence, as they were wont to manifeſt, before Correction; as is already demonſtrated by Us, where we treat of the Extraction of purging Vegetables. Therefore if the common Fire of Coals, and Spirit of Wine, correct Vegetables and Animals immoderately purging; why ſhould not the moſt ſtrong Fire of Salt, ſuch as *Aqua Fortis* is, correct the moſt venomous Mineral Subjects, and be able to tranſmute the ſame (depoſing their noxious Qualities) into an Antidote or Treacle?

From all which, it is ſufficiently manifeſt, that in correcting even the moſt venomous Subjects, Mineral Spirits of Salt are ſufficient; being ſuch, as can deprive them of all their pernicious Venome, and change them into ſalutary Medicaments. Wherefore, I doubt not, but that the ingenious Reader, by theſe few things demonſtrated, will ſufficiently underſtand the cauſe of this ſudden Correction or Fixation of all Volatile and venomous Mineral Subjects. When Ancient Philoſophers, by Poetical Parables, deſcribed the laborious Navigation of *Jaſon* to the Iſland *Colchos*, where reſided an huge *Dragon* vomiting Fire, which, with Eyes never cloſed, diligently watched the Golden *Fleece*; they added this, *viz:* that *Jaſon* was taught by his Wife *Medea*, to caſt to this waking *Dragon* an edible *Medicine* to be ſwallowed, whereby he ſhould be killed and burſt; and that *Jaſon* ſhould preſently take the *Dragon* (thus ſlain) and totally ſubmerge him in the *Stygian* Lake. *Jaſon*, in this ingenious Fable, Hieroglyphically repreſents the Philoſophers; *Medea*, accurate Meditations; the laborious and perillous Navigation, ſignifies manifold Chymical Labours; the watching *Dragon* vomiting Fire, denotes Salt *Nitre* and *Sulphur*; and the Golden *Fleece* is the Tincture or Soul of *Sulphur*, by the help of which, *Jaſon* reſtored Health to his Aged Father, and acquired to himſelf immenſe Riches. By the Pills of *Medea* is underſtood the Preparation of *Sulphur* and *Sal Mirabile*. By the total ſubmerſion of the *Dragon* in the *Stygian* Lake, is intimated the Fixation of *Sulphur* by *Stygian* Water, that is, *Aqua Fortis*. Whence, it is ſufficiently clear, how obſcurely the Ancient Philoſophers did deſcribe their Fixation of ♄ by *Nitre*, and how ſecretly they hid it from the Eyes of the unworthy. But, ſince I, in this Treatiſe, do as clearly as is poſſible diſcover all things, know, that I do it not without Reaſon. It will be enough for any one, if he rightly underſtand the Method of performing ſuch a Fixation.

After any combuſtible ♄ hath been fixed by *Aqua Fortis*, or *Aqua Regis*, and ☉ and ☽ added to it in Fixation, then will that no more be vulgar ☉ or ☽, being ſuch as cannot again be diſſolved in *Aqua Fortis*, or *Aqua Regis*, nor upon a Cupel have Ingreſs into ♄, but paſſeth as it were into a dry Earth, which can neither be reduced by *Borax*, nor any other common fluxing Powders into a ductile Body. If any one be deſirous to know this by Experience, let him diſſolve ℥ ſß of ☉ in *Aqua Regis*, and pour this Solution upon a Pound of *Aqua Regis*, and alſo put this *Aqua Regis* upon ℥iiij of Butter of *Antimony*, and abſtract the *Aqua Regis* thence, Then he will find, that

Gold,

Gold, which was in the *Aqua Regis*, to have mixed it ſelf Radically with the *Sulphur* and *Mercury* of *Antimony*; ſo as not only the Butter of *Antimony* becomes fixed and irreducible, but it alſo renders the Gold ſo irreducible, as thenceforth it can no more be ſeparated from the *Antimony*, but remains adhering to it in every Examen: And can only be ſubduced by our Secret Salt of Metals, volatilized, or rendred fuſile, and ſo be introduced into other Metals for their Amendment.

Therefore, if ſuch a deſtruction of ☉ can be made by *Antimony*, leſs than the half of which is ♁, but the greateſt part ☿; how ſhould the ſame not be better performed by common ♁, which is void of all *Mercury*? I, in all thoſe places where I have taught the Fixation of *Sulphur*, did always adviſe, that *Aqua Regis* to be carefully kept, which was abſtracted from the *Sulphur*; but eſpecially what contained Gold; becauſe together with the *Aqua Fortis*, the moſt pure Soul of *Gold* and *Sulphur* aſcends, and is as much fixed, (I might ſay, more) as that which remains in the bottom. Wherefore, if what I have here imparted be obſerved by any Reader, or by none, it ſhall not trouble me, but I ſhall remain well contented, that I have done my Part, and performed ſo much, as no Man before me ever did; becauſe I have openly taught the Method of extracting in a few hours (by the help of Diſtillation) from ☉ and ♁, or from ☉ and *Antimony*, a fixed Tincture. And theſe I do willingly communicate to the Searchers of Art.

Some write, that *Miriam* the Propheteſs, and Siſter of *Moſes*, knew the Art of elaborating the Tincture in three days, which ſeems incredible to many Skilful Writers. But what will envious Perſons judge, when they ſhall hear, that *GLAUBER*, by a publick Writing, without any manner of Concealment, hath taught the Method of extracting a fixed Tincture out of ☉ and *Antimony*, fit to expel all deſperate Diſeaſes out of the humane Body; and this work to be compleated in one day? Undoubtedly they will exclaim and ſay: *All are Lyes, and ſuch things are impoſſible to be done.* The ignorance and wickedneſs of theſe Men were much more tolerable, if, to their Calumnies, they ſhould alſo add, *Our ignorant Brains perſuade amiſs.* For did they rightly know themſelves, they never would ſo baſely condemn and reprove the Experience of Others. But what ſhall I write againſt ſuch? Nothing, but the Old Proverb, *Effeminate Men, Effeminate Words*; according to the Verſe;

Each Bird ſo ſings, as formed is his Bill;
And ſuch as is the Man, ſo ſpeak he will.

Indeed I would willingly have publiſhed more Examples, of the Method of ſwiftly fixing *Sulphur*, but I am kept back by very weighty Reaſons. Yet I cannot chuſe, but Commemorate theſe few things thereabout; *viz.* that every ♁, without the help of external Fire, by a Secret inviſible Fire only, which is added to the combuſtible ♁, and left with it for a ſmall ſpace of Time, in a cold place, becomes as white and fixed, ſuſtaining all force of Fire, as well as that Fixation, which is made by *Aqua Fortis*, or his abſtraction from the ♁. Wherefore this cold Fixation of *Sulphur*, by our Secret cold, and humid Fire (becauſe it needs no common Fire, no Body, and Head, no Retort with its *Receiver*, and the like) is to be preferred before the other Fixation by *Aqua Fortis*. Therefore for this, we give Immortal Praiſes and Thanks to the moſt wiſe GOD.

If any Reader thinks, I have been too brief, or too obſcure in this Treatiſe, he may more amply ſatisfie his Deſires from the two following Tracts, where we treat of the *Mercury* and *Salt* of Philoſophers; whereunto we refer every one, that is a ſtudious Inquiſitor of Art.

OF THE

MERCURY of Philoſophers.

MERCURY may eaſily be extracted not only from all Metals and Minerals, but alſo from Animals, and Vegetable Subjects, and of the ſame (by the help of Gold) be prepared a true Tincture for all the three Kingdoms.

We, from the Conſent of all true Philoſophers, do certainly know, that ☿ is the moſt pure part of the three Principles of Metals, and therefore doth ſpontaneouſly adhere to moſt pure Metals, and always embraceth them with greater affection, than the impure Metals. As for Example, *Mercury* moſt willingly adheres to its own like ☿; next to ☉; then to ☽; afterwards to ♃, and ♄; and laſtly to ♀; but to ♂ moſt unwillingly, only becauſe it chooſeth rather to mix it ſelf with its like, than with its unlike. For it is wholly Homogeneal, void of all Heterogeneal parts; ſuch alſo are ☉ and ☽. The greateſt part of all other Metals is Heterogeneal, although there is found no imperfect Metal, which hath not in it ſelf ſome part Homogeneal; yet ſo, as the Metal participates more of the one, than of the other; according to the Writings of Philoſophers. Wherefore, a true Philoſopher will ſcarcely affirm, that, by the benefit of the Tincture, the whole Body of imperfect Metals can be tranſmuted into ☉ or ☽, ſince ſo great Virtue is not inſited, even in the Philoſophers Stone it ſelf. For the immature, foul, ſtinking, combuſtible and ſuperfluous ♁ of ♃, ♂ or ♀, cannot, in ſo ſhort time, as Projection is wont to be made in, be converted into ☉, although you caſt in more than enough of the Tincture: But as much as the Metal hath of Homogeneity, that is, of *Mercury*, in it ſelf, ſo much only is tinged and fixed into Gold, the Reſidue not ſo. Becauſe the Stone ſeparates the Heterogeneal parts, that is, the ſuperfluous ♁ burning it ſelf (in the form of *Scoria*) from the *Mercury*, which it only tingeth into Gold; becauſe it hath no Communion with thoſe Heterogeneities; as I have daily found, and in the following Part, where we treat of the *Salt* of Philoſophers, I purpoſe to demonſtrate more at large.

Now let us ſee the Method, by which Metallick ☿ may with little Labour be extracted, not only from

Metals

Metals and Minerals; but alſo from all Animals and Vegetables. I ſaid, *With little Labour*, in reſpect of experienced Men. For in reſpect of the Unskilful, it is not a Work of ſmall Labour; but in the Memory of all Ages it hath been accounted (by all the moſt experienced *Lovers* of our *Art*) the *Secret of Secrets*, and the neareſt way to come to the Attaintment of the true *Univerſal Medicine*. Nor will it ever be of leſs Eſteem, ſince in the whole Nature of things, a more pure matter cannot be found, (whereof to make the Stone of Philoſophers) than this only *Mercury* of Metals. In the mean while, it is eaſie to judge, that the *Mercuries* of Metals differ in themſelves notably, and that one of them is better, and more conducible than another, for preparing thence a Tincture for Humane and Metalline Bodies. For one is always better in Colour and Tincture than another. Indeed, by the external Face, almoſt no Man is able certainly to know, from what Metal or Mineral the beſt *Mercury* may be had: Yet according to the general Opinion of Philoſophers, the moſt excellent ☿ is wont to be prepared of the *Vitriol* of ♂ and ♀; becauſe theſe two Metals do moſt abound with Tinctures. I, being taught by Experience, am aſſured, that out of black Aſh-coloured ♄ may be acquired a ☿, as excellently tinged, as from both thoſe Red Metals, ♂ and ♀. Yet in the mean while I do not deny, that the ☿ of ♂ and ♀, is impregnated with ♃, tinging in the higheſt degree; as Ancient Philoſophers, in theſe few words, have compendiouſly expreſſed. *Viſitaris Interiora Terræ, Rectificando Invenies Occultum Lapidem, Veram Medicinam.* By which Words, *VITRIOLUM* [or *Vitriol*] is expreſſed; which proceſs is no other, than a Solution of *Mars* and *Venus* prepared by the Labour of Nature. But *Vitriol* prepared thus by Nature, is never found ſo pure and clean, as that which is prepared of good Steel, and pure ♀, by the help of Oyl of *Sulphur*, or inſtead of that, Oyl of *Vitriol*: Becauſe the Native contains more Earthineſs, than that which is made by Art. Now let us return to our *Mercury*.

VITRIOLUM.

I think good here, to adviſe all the Lovers of our Art, not to bend their thoughts ſo much upon vulgar ☉ and ☽, as to endeavour out of them to extract their ☿ and ♃. Becauſe common ☉ and ☽ are altogether Homogeneal, and have nothing of Heterogeneity in them; and therefore difficult to be wrought on. And although they were as eaſie to be wrought on as ♂ and ♀; yet it would be no Profit to uſe them; becauſe of their greater Price, and alſo becauſe there is much more Tincture contained in vile and contemptible ♂, than in ☉ it ſelf. It is true, this Tincture is not yet fixed, but is volatile, and may eaſily be fixed. Wherefore I adviſe every one to ſeek ☿ in ♄, and ♃ in ♂. Upon ☉, in times paſt, through my Ignorance, I conſumed much without any Profit, and laboured Fruitleſly, until I had conſumed ſome Pounds of it, to find out for others a more ſafe Way; which if any one had ſhewed me, I would never have laboured in vain. But I was hard to believe, that they, who were unwilling to uſe common ☉ and ☽, could prepare an apt Tincture, for tinging imperfect Metals into Gold. Yet ſince vulgar ☉ and ☽, do not only give eaſie Ingreſs to thoſe Tinctures, which draw their Original from the ♃ and ☿ of Philoſophers; but do alſo further the Fixation of volatile *Mercury*; therefore we cannot well be without them, in the Compoſition of the Stone of Philoſophers. Let the Lovers of Art take Cognizance of theſe few things for their Information.

Now it is neceſſary to be known, by what Method the ☿ of Philoſophers may moſt commodiouſly be extracted from Metals and Minerals, and by the help of ☉, be duly fixed by Art, into a Tincture for humane and metallick Bodies.

Firſt, we are not ignorant, that the pureſt part of Metals, *viz*: Homogeneal *Mercury*, is tyrannically held Captive in a certain obſcure Priſon, by his moſt inveterate Enemy, ſuperfluous burning *Sulphur*. Therefore, if any one would unbolt his Chains, and ſet him free, he hath neceſſity to mortifie and annihilate his Enemies, by which he is ſo faſt bound and impriſoned, before he breaks down the Priſon Walls, and delivers *Mercury* from Captivity: Which ☿ will alſo bring forth with him his natural Brother, *viz.* tinging ♃. Theſe being at Liberty, nothing will be wanting to fix them into a Tincture, but the help of vulgar ☉. But if any one be not ſatisfied with this ſhort Paraphraſe, let him read either *Sandivogius*, who hath writ an intire Treatiſe of ſuch a freeing of Captives; or *Paracelſus*, who, no leſs eminently than plainly, hath diſcovered his mind touching the ſame.

Now follows my own Experience, Way and Method, by which I have ſeveral times freed the forementioned Captive, and ſet him at Liberty.

Although I have my ſelf extracted the *Mercury* of Philoſophers from Metals, by ſuch divers Methods, as I mean here to diſcover; yet I always found ſome better than other ſome. Therefore out of ſuch Proceſſes, ſome of which we here ſubjoyn, every Man may, as beſt pleaſeth him, take which he thinks moſt conducible, and proceed in Operating according to that, until he finds, what GOD ſhall be pleaſed to beſtow on him.

Mercury is never to be extracted from hard Metals, before they be diſſolved and unlocked. Unlocked more commodiouſly they cannot be, than by the Corroſive Spirits of Salt. Yet ſince all Corroſives are moſt inimical to ☿, they have no Power of making either Living or Running *Mercury*. Therefore, after Solution, the Corroſives muſt be mortified by contrary Salts; ſuch are, Salt of *Tartar*, Spirit of *Urine*, *Sal Armoniack*, &c. This being done, the Corroſives changing their Nature wax gentle, and in Diſtillation permit the ☿ to aſcend: Which otherwiſe, without Mortification of the Corroſive, would not happen, as you will learn by the following Proceſſes.

Therefore, ſince it is moſt certain, that Metals are to be diſſolved, before ☿ (by the help of Reſuſcitating Salts) can be diſtilled thence; we will firſt exhibit the Method, by which ☿ may be extracted from ſuch Metals, as Nature preſents to us already diſſolved; *viz. Vitriol*, which is no other then *Mars* or *Venus*, or ♂ and ♀ together, diſſolved by the Univerſal Acidity. Hence, whoſoever will uſe (in his intended Work) ſuch *Vitriol*, in which both thoſe Metals are found highly tinged and diſſolved by Nature; he will not need by tedious Labours to ſeek out a new Method of diſſolving Metals, but may ſpare both his Time and Charges. Therefore, now it will be expedient to teach, how *Mercury* may be prepared of any common *Vitriol*.

The Proceſs follows.

Diſtil from common *Vitriol*, in the uſual manner, an Acid Spirit, and fiery Oyl, with ſtrong fire, according to Art. For in the Spirit is latent the ☿ of ♂ and

and ☿, which by Mortifying the Corroſive, may be brought to light, and made Viſible as follows.

℞. Of *Tartar* calcined unto Whiteneſs ℔ i, or ij, which reduced to Powder, put into a Glaſs Body, on which ſet an Head with its Hole and Tunnel in it, well luted; then apply a Receiver, and lute the Junctures exactly. When the Body and Head is placed in warm Sand, through the Tunnel, at one time pour on about one or two *Lotones* of the ſharp Spirit of *Vitriol*, upon the *Tartar* calcined; whence will be cauſed ſo great Ebullition, as by its own proper Power the Spirit will aſcend from it. This Duel or Fermentation being ended, again pour in ſome Ounces of that Spirit; which alſo leave, till all the Ebullition ceaſeth. Afterward reiterate the like injection, until that Acidity contends no more with the *Tartar*: Which will be an Argument, that the Salt of *Tartar* is ſufficiently mortified. When you ſee this, adminiſter Fire, and by Degrees draw forth all Humidities, unill the Veſſel and Matter is Red hot. The Water that aſcended (which in Taſte will be almoſt like Spirit of *Urine*) muſt be rectified; in which Rectification the ☿ of the *Vitriol* aſcending, is rendred more ſubtile and more pure. This pure *Mecurial* Water bears in it ſelf inviſibly contained, a living Metallick *Mercury*, which is made conſpicuous thus,

The Conjunction of Philoſophick Mercury *with Gold.*

Diſſolve common ☉ in a ſharp *Aqua Regis*, and ſeparate the diſſolved from the undiſſolved. Then leiſurely, and at times, drop after drop, pour of your ſubtile Mercurial Water upon the Solution of ☉, ſo long, as until the Spirit of the *Mercury* hath no more Action upon the Solution of Gold, but ceaſeth, and all the ☉ ſhall be precipitated from the Water. In which Precipitation, the ☉ attracts to its ſelf the *Mercury* of the *Vitriol*, from the Mercurial Water, in ſuch a manner, as it ſettles to the bottom of the Veſſel, in the form of Slime, or a yellow Powder. Let the Precipitate be filtred through brown Paper, that the *Saline* Water may paſs through; and the precipitate ☿ remain in the Filter mixt with the Gold; which muſt be very well waſhed with ſweet Water, and, being edulcorated, dryed. This being done, you will have the ☿ of *Vitriol* united with the ☉: Both which will ſuffer themſelves to be fixed into a true Tincture, for Humane and Metallick Bodies, as follows.

The Fixation of Mercury *with Gold.*

Note: Before the *Mercury* is put in to be fixed with the Gold, it muſt be proved, whether it be duly prepared, or not. For if the Mercurial Water was rightly prepared, it will contribute *Mercury* enough to the Gold; by which ☿ the precipitated Gold is ſo augmented, as tis no more common ☉. But if the Mercurial Water was not legitimately prepared, and conſequently could not contribute much ☿ to the ☉, the Gold will remain poor, and, as ſoon as it is ſenſible of any heat, will fulminate, like any other fulminating Gold, and ſo be altogether unfit for Fixation, being deſtitute of a tinging ☿, which ſhould have converted the whole Body of ☉ into Tincture. Wherefore, after Precipitation of the ☉ and ☿, you muſt make a ſmall part of the Precipitate hot, in a very ſmall Crucible, for Tryal, whether it be fit to be fixed. For if it fulminates, like fulminating ☉, it is a ſign your Mercurial Water was not perfect, and could not give unto the Gold ☿ enough. But if after it ſhall be Red hot in the Fire, it comes forth with a delicate purple Colour, it is to be ſuppoſed, the ☉ hath imbibed ☿ enough, and they both be fixed together into one Tincture.

Note: Beware of too ſtrong a Fire. For this way the *Mercury* will leave the Gold untouched, and fly away; ſo as, thence you can have no certain Tryal. Therefore, in all parts of the Work proceed Warily and Prudently. The Fixation of ☿ with ☉ is thus made:

The Fixation of the Mercury *of* ♂ *and* ♀, *into one Tincture.*

℞. So much as you have ready prepared of this our *Mercury* impregnated with Gold, although there be no more of it, than half a *Loton*: For here no great quantity is deſired. Put it into a ſmall Glaſs Phial, which place in hot Sand; yet take heed, you give no ſtronger Fire, than your Volatile Bird can bear. This Fire you muſt continue in a moderate degree for ſome Weeks: For by that means, your *Mecury* will by little and little, be able to brook the Fire, adhere to the Gold, and convert the ſame into Tincture. But if any one, contrary to the ſerious Interdiction of all Philoſophers, make too much haſte, and perſuade himſelf, he may in a ſhorter ſpace of time acquire the Tincture; his *Mercury* will fly away, and leave the Gold pale behind it; becauſe the ☿ in its flight ſubſtracts the Colour of the ☉, and carries it away with it ſelf. Therefore, in Fixing there is need of Patience. Hence all Philoſophers adviſe, not to be haſty. For Feſtination proceeds from the Devil. Wherefore, let every one ſo far ſtudy his own Good, as to be obedient to this Admonition.

Note: There are alſo other ways, or Methods, of fixing ☿ with ☉; but he doth very fooliſhly, who, when no neceſſity urgeth, will proſtrate all things together and at once, at the feet of Swine. Whomſoever GOD will be pleaſed to aſſiſt, he may triumph in the higheſt help; but whom GOD doth not aſſiſt, even the moſt plainly preſcribed Method cannot help him. For all our help depends on the divine Bleſſing.

How to prove, whether Mercury *be Legitimately prepared, and whether it can give forth the Tincture of Metals.*

℞. Of the Mercurial Water above deſcribed, and mortifie it by a contrary Acidity, as Oyl of *Vitriol*, or Spirit of *Salt*. Then the *Mercury* will precipitate it ſelf, in the form of an Aſh-coloured Powder, which if you edulcorate, and grind with Oyl of *Tartar*, you will vivifie. If any one be minded, he may alſo diſtil the ſame by Retort, and ſo examine it.

A Tryal, or Proof, whether the Mercury *of Metals be ſo well prepared, as of it with* ☉ *may be made a Tincture.*

℞. A little of that, *viz.* the quantity of a Pea, and put it upon a Silver Plate, then over the Fire permit the *Mercury* to be evaporated. If it tinge the Silver well with a purple Colour, it is fit for the Work, otherwiſe it will be of no Value. Alſo, this ☿ may be digeſted with the filings of ☉, in a due meaſure or proportion mixed, and ſo fixed. But this Fixation, as well as the former, require a long time, and ſo much Patience, as all Feſtination muſt be laid aſide. Whoſoever is ſo covetous, as he cannot wait till the Fruits are Ripe; he would be better adviſed, if he abſtained from ſo great a Work, than to ſet about it to his own

Damage. I have often prepared this *Mercury*, and put it to be fixed; but becauſe I could not look to it my ſelf with my own Eyes, I was conſtrained to commit the Governance of the Fire, to the Induſtry of another, and then it ſucceeded unhappily. And when by reaſon of my Age, and imbecillity of Body, I was wholly uncapable to take in hand a Work of ſo great moment, I communicated the Method to ſome of my intimate Friends, with this Condition, *viz.* that they ſhould elaborate it themſelves. But becauſe in that Operation, they could not acquire ſo much ☿ as they deſired, they deſiſted, and would not proceed to the Compleatment of the Work. Hence I was moved rather, by Printing, to divulge ſo Royal a Work, than to let it be buried with me: Although I was difficultly brought to an hearty Aſſent, to yeild to the Revelation of *Arcanum's*, of ſo great moment, to this Malignant and unfaithful World.

The way of Preparing a tinging Mercury *out of* Antimony.

℞. Of *Antimony*, *Saltpeter*, and *Tartar*, of each ℔ j. Which, firſt pulverized and mixed, put into a Crucible, and kindle the Mixture with a Coal; when the Fulmination ceaſeth, melt it, and pour it out into a Cone. After it is cooled, ſeparate the *Regulus* from the *Scoria's*; which reduce to Powder, and diſſolve by boyling in Water. So doing, you will have a Red *Lixivium*; upon which if you add (about half its own weight of) *Salarmoniack* pulverized, and put the Mixture into a Glaſs Body, (which muſt not be above half full, becauſe it riſeth eaſily) with it's Head and Receiver well luted, and then ſubminiſter Fire for Diſtillation; a certain moſt ſubtile volatile Spirit will aſcend, in which the ☿ of *Antimony* is latent: Which, in a Solution of ☉ may be precipitated, edulcorated, dryed, and then proved and fixed, as above we taught of the *Mercury* of *Vitriol*. *Antimony* yeilds much more ☿, than *Vitriol*; and it is alſo made more eaſily than it; and therefore to be preferred far before it; but eſpecially, becauſe the Ancient Philoſophers did for the moſt part uſe this ☿ of *Antimony*, for preparing their Tincture.

Note: If any one deſire a more excellent ☿ of *Vitriol*, than That above deſcribed by Us; he, inſtead of the *Lixivium* of *Antimony*, may uſe a *Lixivium* of *Salt* of *Tartar*, and thence extract *Mercury* by the help of Oyl of *Vitriol*; ſo he will have ſome thing more excellent, than can be made of a Common *Lixiuium*.

The way of Preparing out of ♂ *and* ♀ *a tinging* Mercury, *by the help of Reſuſcitative Salts only, without any Corroſives.*

Among all Reſuſcitative Salts, *Tartar* obtains the principal place; the next to which is Salt of *Urine*, which is no other, than ſuch a Volatile *Tartar* as paſſeth into this kind of Salt, from Wine, Beer, Bread and other Foods taken into the humane Body. Almoſt of the ſame kind, is the Soot of Chimneys, being the Volatile Salt of Wood. Alſo a like Volatile Salt you ſhall find in Blood, Hairs, Horns and Hoofs of Animals. Even ſo, almoſt a like *Salarmoniack* is prepared of Blood, Urine and Soot. In like manner, in Eggſhels is inſited an efficacious Reſuſcitative Salt. Theſe and the like Salts are endued with a Virtue converting Metals into *Mercury*, after they are diſſolved. For volatile Salts are not ſo efficacious, as to diſſolve Metals: Yet *Tartar* is endued with ſo great Power, as it can diſſolve ſome Metals eaſie to be diſſolved, as ♂, ♀ and ♄, and thence may the *Mercury* be extracted by Diſtillation; eſpecially if a little Kitchin Salt be added, or (which is more conducent) *Salarmoniack*, to comfort it. Alſo inſtead of ♂ and ♀, common *Vitriol* only may be uſed; and thence *Mercury* diſtilled by the help of volatile Salts.

Now follows the Proceſs.

℞. ℔ vj. Of *Vitriol*, to which, diſſolved in Urine, add of *Salarmoniack* ℔ j. Crude *Tartar* ℔ ij. Salt of *Tartar* ℔ iiij. Diſtil from theſe, in a ſtrong Glaſs Body, a ſubtile Mercurial Water; which, according to the Method preſcribed, may be made Corporeal, and with Gold be fixed into a Tincture. This way of proceeding is very eaſie, and of little Charge; ſo as it will fully ſatisfie the deſire of thoſe, who are contented with ſo much only, as may be acquired by the benefit of Glaſs Bodies. But thoſe, whoſe greedy deſire cannot be ſatisfied with little, may diſtill this Mixture in a Braſs or Copper *Veſica*, untill they have quantity enough to ſuffice them: Yet with this Caution, that they uſe no *Alembick*, or *Refrigeratory* made of Copper, but of Lead, or (which is better) of Tin; and that becauſe our Mercurial Water eaſily corrodes the Copper, and thence contracts to it ſelf a Greenneſs: But in ♄ or ♃ doth not ſo. But if any one refuſeth to be at the Charge of a Tin *Refrigeratory*, he may uſe his Copper Veſſels. For although the Spirit corrodes the Copper, and contracts a blewiſh Colour, yet this Colour in Rectifying abides in the bottom, and the ☿ is nothing the worſe. Indeed, this way a greater quantity is acquired, than needs; unleſs the Operator be more greedy than a Wolf. But it is not the part of a good Philoſopher, to covet more than is needful. If any one be deſirous to prepare an abundance of Mercurial Water, either by ſome ſuch way as this, or by another certain Mixture of Salts, him we have now, as it were, led by the hand, through Proceſſes more difficult, to proceed in theſe. For *Tartar* alone will be ſufficient for ſuch an Uſe. What ſeek you? The Feces of Wine burnt will do the ſame; ſo as the Lover of Art, with almoſt no other Trouble and Charge, may extract the *Mercury* of Metals by Reſuſcitative Salts.

The way of Preparing Mercury *out of Metals and Minerals, by the benefit of* Tartar *only, without any other Salts.*

℞. Filings of Steel ℔ j. *Tartar* ℔ ij. Common Water ℔ xx. If by ſtrong boyling by *Alembick* in Sand, you diſtil thence all the Water; the *Tartar* in that boyling diſſolves the ♂, and ſo will Volatilize the *Mercury* ſet at Liberty, in ſuch wiſe, as it will aſcend with the Water, like a ſubtile Spirit; which, (concentrated and made fit by Rectification) either by a Solution of ☉, or by ſome other contrary Acidity, is rendred Corporeal, according to the Method above ſhewed. If any one, to as much *Tartar* as he hath, take half ſo much *Salarmoniack*, the *Tartar* ſo much the more readily preys upon the ☿, alſo much more *Mercury* iſſueth thence, than by *Tartar* only.

Note: But ſince this way, in one Diſtillation, but little *Mercury* aſcends, ſuch an Operation may be performed in a large *Veſica*; yet with this Caution, *viz.* that the *Alembeck* and *Refrigeratory* be not made of Copper, but of Tin or Lead. This way of Operating by a *Veſica* will be of great uſe, eſpecially for ſuch covetous Men, as cannot be content with few things; but

but always labour with the perpetual Poverty of an unsatiable Spirit; although, they more than sufficiently abound with the fulness of all desireable things. For he is only Rich, who is always content with his present Fortune.

The way of Preparing Mercury *of* Saturn, *by* Tartar *only.*

℞. One or two ℔. of the Raspings or Filings of *Saturn*, upon which pour fifteen, or twenty ℔. of strong Vinegar of Wine, and mix therewith a little pulverized *Tartar*. But the Vinegat *per se* should be impregnated with no small quantity of *Tartar*. Which *Tartar*, if you distil with the Mixture, the Phlegm in Distillation carries over with it self a subtile Mercurial Spirit; which must be separated from the Phlegm, in manner as we above taught. The Solution of ♄ will remain in the bottom. Thence also, by the help of Salt of *Tartar*, ☿ may be extracted by Retort; yet it is not so good as the other, which ascended in the form of a subtile Spirit.

The way of Preparing Mercury *of* Antimony, *by the help of* Tartar *only.*

℞. Some Pounds of strong *Antimonial* Red *Lixivium*, (made of *Antimony* duly, decrepitate and melted with *Tartar* and *Nitre*) which put into a Glass Body set in Sand, as we above taught, in treating of the Fixation of ♃: Afterward, through the Tunnel, leisurely and at times, pour upon the *Lixivium* most strong Wine Vinegar, until both (*viz.* the *Lixivium* and Vinegar) cease to Act upon each other. This being done, if by Distillation you separate all the Humidity, the Sulphureous Spirit of *Antimony*, will ascend in the form of a subtil Spirit, smelling like *Sulphur*: Which after Rectification, either with a Solution of ☽ or ☉, becomes Corporeal, and so habile, as it may be converted into a fixed Tincture.

The Method of Distilling a tinging Mercurial Spirit from Metals another way.

We above shewed, that from Metals most firmly compact, a tinging ♃ and ☿ could not be extracted, unless the Metals be first dissolved, or mortified; and that in such Mortification, there is a Spirit so apt to be associated, as, in the very hour of Mortification, it lays hold of, and carries up with it self, the ascending Spirit, or Soul of Metals. Yet among all, pure Spirit of Wine well dephlegmated, I judge best; because in abstraction it carries over with it self the most pure ♃, and ☿ of Metals, and leaves the Gross dead Body behind in the bottom; so as, such *Mercury*, as you shall draw forth in distilling by Spirit of Wine, will be much purer, and more Virtuous in Tinging, than the other, which you distil off by common Water only; and that for this especially, *viz.* because this Spirit, which is extracted by Spirit of Wine, from more pure is rendred most pure by Rectification. Which is a thing impossible to be effected, where the Sulphureous ☿ of Metals shall ascend by the help of common Water; because then the Water only, in Rectification, is distilled off, but the ♃ remains in the bottom, in form of a Red Powder: And the other, which is sublimed by Spirit of Wine, and afterward by Rectification subtilized to an higher degree, and meliorated in its tinging Virtue, is not only in *Medicine*, but also in the Melioration of Metals, Gems, and the more ignoble pretious Stones, an hundred fold more efficaciously conducent to tinge them to a Constancy, than the former, which, in distilling, ascends by Water only; and by Rectification cannot be exalted, or multiplyed in its Virtue, so well as the other, made by Spirit of Wine. That Sulphureous ☿, which ascends by help of Spirit of Wine, is endued with so subtil and penetrative Power, as to it in the Vessel is given such Ingress, by which Metals and Gems are tinged with a more constant and durable Red, or Yellow Colour, than can be annihilated or impaired by any Corrosive Waters, or by the violence of Fire; especially if it be distilled from apt tinging Subjects, as the *Vitriol* of ♂ and ♀, or from *Antimony*. Of which I suppose enough is now spoken.

Therefore, if any one be desirous of knowing more touching this Matter, him (for his further and more clear Information of the same) I refer to the Seventh Part of our *Spagyrick Pharmacopœa*; where he will find, we have prolixly taught, touching the extraction of Tinctures, from Red Corals, and other tinging Subjects.

The way of making good Mercury of Saturn *and* Luna.

℞. Of ♄, or ☽, ℔j. which, dissolved in *Aqua Fortis*, precipitate with Salt-water, edulcorate the Calx with Sweet-water, and dry it. When dryed, mix with it a fourth part of our ♃ fixed unto Whiteness. Distil from the Mixture in a coated Retort its ☿ with strong Fire; which notwithstanding will not be living ☿, but, in the form of a Sublimate, will adhere to the Neck of the Retort, in weight heavy, and to the Taste of the Tongue very sharp. Indeed there will not be so great a quantity of it, as some may desire, yet it is worthy of the highest Estimation. For in a Cold Cellar it is easily dissolved, and becomes a strong Mercurial Water, which dissolves all Metals. This Water prepared of ♄ joyns it self (with an incredible Love) with the Soul of ♂; and suffers it self to be fixed with it into Tincture; This Water prepared of ☽ readily dissolves Gold, and with it passeth into Tincture. The Reason, why, I in Distillation, mix fixed ♃ with the ♄ or ☽, is this: Since both these Subjects, precipitated, as we above mention, with Salt-water, are very fusile and penetrating, easily melt together into one, and in Distillation yeild no ☿. Nor can Sand or Earth prevent this Fluxion. Wherefore, I could find nothing more conducible, than our white fixed *Sulphur*.

The way of Preparing Mercury *of* Jupiter.

Jupiter gives forth from it self, a most excellent *Mercury*, in form of a subtil Spirit; which, above all other *Mercuries*, is most earnestly beloved and attracted by Gold. For if but a very small quantity of it be put into any Solution of Gold, it in a moment draws to it self all the Gold from the sharp *Aqua Regis*, and together with it settles to the bottom, like a purple Powder. This is the best Precipitation of ☉, when you shall extract it with *Aqua Regis* from Sand and Stones: Because, by this Precipitation, the *Aqua Regis* may be used again for extracting ☉ from Sand and Stones, as you may more amply read in our Seventh Part of the Prosperity of *Germany*, where we have plainly writ touching this kind of Extraction. But in another manner, may be prepared as powerful a Mercurial Water from all Metals, by the help of my Secret *Sal Armoniack*,

niack, which, by *Paracelſus* and *Helmont*, is called the Liquor *Alcabeſts* touching which, I have largely treated in the Seventh Part of my *Spagyrick Pharmacopæa*, where he who loves ſo great Gifts of GOD, may ſatisfie his Appetite to the full.

Behold, I preſent thee another way, by which, without any Charge or Expenſe of Money, you may eaſily prepare as much of the Philoſophick ☿, *as you will.*

I would not have you to ſuppoſe, I hree inſert this ſo ſtinking a Proceſs, to the end you ſhould follow this, rather than the before-mentioned; but I add this, that the common ſort of Men, ſimple and poor, may ſee, that they may, by ſuch a Method as this, ſuppreſs their Poverty, and attain to the Acquiſition of ſo noble an univerſal *Medicine*, as well as any other of the great and mighty Men of the World, by their ample Fortunes.

Whoſoever is but a little Skilled in *Chymiſtry*, well knows, that every ♃ and ☿ ariſe from one only Original; and that the *Sulphur* in Herbs, and alſo that in Animals, is of no leſs Virtue, than the other in Metals, Fixation only excepted. For as this in Metals is found more fixed than that in Minerals, ſo the Mineral ♃ is more fixed than the Animal, and Vegetable. The ſame is to be judged of *Mercury*. But that we may wander no further, but return again to our Purpoſe, and clearly preſcribe the Method of *Preparing an univerſal Medicine, of Humane Urine and Dung*, I will very briefly diſcover the Proceſs in theſe following Words.

℞. A good quantity of humane Dung and Urine, collected in ſome capacious Veſſel, and (after they have ſtood together about a Month, and when the *Salt* ſhall be exactly united with the *Sulphur*, and *Mercury* by Fermentation) from thence, by an *Alembick* in *Balneo*, diſtil the Mercurial Sulphureous Spirit; which indeed will be very ſubtil, but ſmell ſtrong. Yet after Rectification, as we have taught, it may be conjoyned with a Solution of Gold, and, by moderate heat, be gradually fixed into an univerſal *Medicine*, for Humane and Metallick Bodies.

Note: The aforeſaid Stink vaniſheth ſo ſoon as the *Aqua Regis* hath Acceſs. Wherefore, thoſe Philoſophers, who have laboured in Matters of evil and ſtrong Smells, did always ſpeak of ſuffocating their venemous Dragon in *Stygian* Waters. But among all Philoſophers, that ever I read, I find no Man more excellently to have writ, touching this matter, than the *Philoſopher Neuſementius*, in a certain ſmall Treatiſe of his, intituled, *Of the Salt and Spirit of the World*; where he ſo explains the Table of *Hermes*, as he renders it moſt worthy to be Read; becauſe he hath ſo very prolixly, and largely, with exquiſit ſtudy and diligence, explained all things whatſoever, the laudable *Hermes*, in very few Words, left to Poſterity in his *Smaragdine* Table.

A COROLLARY.

ALthough I have, in this ſmall Tract, ſo largely and clearly treated of Preparing the *Mercury* of Philoſophers, as it ſeems altogether needleſs to trouble the Reader, with a further Paraphraſe; ſince from him, I have not concealed any Methods of manual Operation, but have ſo revealed all things neceſſary to be known, as he (who, only ſeeking the bare Letter of the preſcribed Method, knows not how to elaborate his own intended Work) may rather be accounted a Man of a dull Capacity, than a Chymical Operator: Yet ſince unto all inſatiable Sons of Avarice, according to this my Deſcription, there ſeems to be too ſmall a part of *Mercury* extracted, I (for the ſake of thoſe alſo) will demonſtrate yet another Method, by which they may obtain a larger quantity of good tinging ☿, than from Metals can be gained. But firſt it is required, that every one, who will exerciſe himſelf in this kind of Labour, ſhould ſhew himſelf a diligent Operator, ſhunning no Pains: Know, that Vulgar *Mercury* may eaſily be ſo prepared by Art, as to be as much conducent for Tinging, as the *Mercury* of Metals. Yet they muſt firſt procure Tincture to it, by tinging Metals, as by ♂, ♀ and *Antimony*. For, of its own proper Nature, it hath no Tincture at all in it ſelf; but it muſt neceſſarily receive the ſame from other Metals, (in which GOD and Nature co-operating have inſited it) before it, can exerciſe the Power and Faculty of Tinging. But which way ſuch a Tincture may commodiouſly be taken, and acquired from certain Stones tinged by Nature, or from certain Metallick, and Mineral Subjects, hath been by me, in various places of my Writings, ſo frequently mentioned, as I judge it not neceſſary to Diſcourſe further thereabout in this place. But here, I will freely expoſe to publick view the way of Preparing vulgar ☿ ſo, as it may be able to extract Tinctures from Metals, Minerals and Stones.

℞. Common *Mercury* ℔ j. Which as ſoon as you have diſſolved in *Aqua Fortis*, mortifie the *Aqua Fortis* by pouring on Spirit of *Urine*, and when you ſhall by Retort, in hot Sand, have abſtracted thence all the unprofitable Water, and adminiſtred a ſtronger Fire, the *Mercury* will ſublime it ſelf in the Neck of the Retort, white in Colour, but diſcovering no ſingular *Acrimony* upon the Tongue. Such a ſublimate as this, is eaſily diſſolved by help of common Water. This *Mercurial Water* is endued with a power of extracting Tinctures from Metals, Gems, and other more ignoble Stones. In which very Work, even *Proſerpina*, the Wife of *Pluto*, will ſcarce elaborate any thing more excellent: Therefore, when this ☿ hath drawn ſo much Blood from the *Red Lyon*, as it no longer remains White, but becomes totally Red; then indeed it hath acquired the Melioration of one higher degree; but as yet, it is able to work no Miracles in Tinging. Now, that it may be exalted to ſo great Perfection, as to be admirably efficacious in Tranſmutation; this Red *Mercury* muſt again be vivified, and again (as we taught above) mortified; and if this Labour be repeated ſeven, nine, or twelve times, it will be ſufficiently impregnated with Tincture. This being done, you have nothing elſe to do, but to fix this tinging *Mercury* into a fuſile Red Stone, which will thenceforth perform the ſame (yea perhaps more) in the Tranſmutation of Metals, than the *Mercury* of Metals it ſelf.

Although, I have here revealed the Melioration of common *Mercury*; yet, I am fully perſuaded, no Man will readily ſet himſelf about its Preparation, nor adventure, by Tryal, to experience the truth of this. For commonly, every good thing is diſeſteemed, if it want external Splendor. Some years ago, I did earneſtly, and highly commend to ſome of my moſt loving Friends, the Exaltation of common *Mercury*; yet no one of them took ſo much notice thereof, as ever to

ſet

ſet his hand to the Work. Wherefore no Man needs to fear, that Art will be made too common, although I had publiſhed the ſame, deſcribed even with a *Solar Ray*. Indeed, I intended to have divulged more touching ſuch ſublimate *Mercury*, as may be diſſolved with common Water, *viz.* how many other famous Works may be performed with it, beſides the Tranſmutation of Metals; but for brevity ſake, I here deſiſt at preſent: Yet after a little while, (if GOD permit) I will elſewhere treat of the ſame. In the mean time, let the loving Reader kindly accept of theſe; For hence he may be aſſured of the poſſibility of exalting common ☿ ſo far, as to be equal in Virtue to the *Mercury* of Metals: In which Aſſertion every ſtudious Artiſt may ſafely confide, and perſuade himſelf, that I here give no other Teſtimony, than I have learned by my own Experience oftentimes.

OF THE

Salt of PHILOSOPHERS.

How, and whence, That is Prepared, and of what uſe It is in Medicine *and* Chymiſtry.

THoſe our venerable Anceſtors, the ancient Philoſophers, have indeed copiouſly written many things, touching this Third Part of the Principle of Metals, *viz. Salt*: Yet ſo very obſcurely, as it is almoſt impoſſible for a Man to learn thence, Fundamentally, any thing of moment: Yea, I might ſay, it hath happened to very few, to know how, to prepare the *Salt of Philoſophers*, but on the contrary, ſix hundred have ruined themſelves, and loſt all their Fortunes in labouring thereabout. After, I alſo had, for ſome years together, expended great Labour and Coſt, beſides what I ſpent in acquiring both the other Principles, *viz. Sulphur* and *Mercury*, (which were underſtood by me, about two years ſince) it pleaſed the moſt wiſe GOD at length, alſo to reveal to me this moſt famous *Salt*. Wherefore, I could not refrain from communicating ſome thing of it to Poſterity, for the Glory of my GOD, and for divulging his wonderous Works, not doubting, but that this my Revelation may be of great Concern, to open the Eyes of this blind World. Becauſe, they may be helped by ſuch a Salt, of which, ſo incredible Works may be prepared, as I am now about to write, and are already ſufficiently known to me.

I can unto every Man ſafely, ſurely and truly affirm, that whatſoever I here write, are not the idle Dreams of a vain Man, nor patched together out of other Books, but true and ſolid Experiments, which I my ſelf, with the help of theſe my hands, have found out. Indeed, I do not here ſay, that I could give no credit at all to him, who no long time before diſcovered ſomething to me, touching ſuch *Arcanum's*; but I thought his Words intimated Paradoxes and Impoſſibilities; although I had read Philoſophers, who writ: *He that hath the Salt of Metals, hath the Stone of Philoſophers*. I alſo well know, that the *Salts* of *Metals*, according as they been hitherto every where fraudulently preſented by *Pſeudo-Chymiſts*, having no ſolid Foundation, do not indeed deſerve the name of Salts; being no other, than ſuch *Vitriols*, as by the ſharp Spirits of *Salts*, are prepared of Metals; and are not at all efficacious to meliorate any of the more vile Metals. On the contrary, we certainly know, that our more true Salts do ſo amend all imperfect Metals, as great and gainful Fruit may be reaped thence, as by the following ſhall be clearly made appear. But before we write any thing of the Uſe, of this *Royal Salt*, it will be worth while to premiſe ſomething briefly, and truly, touching the Preparation of the ſame.

Of the Preparation of the Salt *of* Philoſophers.

Now, that I may, without any wandring Ambages, deſcribe the Method of Preparing this Salt, which is incomparable and Royal, know in very deed, that this Salt is no other, than common (but rightly prepared) Oyl of *Vitriol*, Coagulated by white fuſible *Sulphur* into a ſweet Salt, which impreſſeth not on the Tongue, the leaſt Saline ſavour; but rather ſeems to be a Stone than Salt, although fuſible, like any other liquid Salt. But how that Oyl of *Vitriol*, or Univerſal Acidity, may be changed into ſuch a wonderful Stone, not Corroſive, I purpoſe not to divulge. It is enough for me poſitively to affirm, it may be done.

Whoſoever deſires to know more of it, let him implore the help of GOD, and peruſe the Writings of Philoſophers, that if he be worthy of this divine Gift, he may be helped; if he be not worthy, I cannot help him. For as I acquired that, not without praying and ſeeking; ſo alſo, muſt every other Man reſolve to do: Becauſe, no Man ſhall ever get more out of me, than what I here have willingly diſcovered for publick Good. Now follows

The incredible Virtue and Efficacy, which this wonderful Salt manifeſts in Preparation of Tinctures, for exalting all Metals and Minerals to the perfection of Gold.

Although it is before ſaid, that Salt, or the Stone of Philoſophers, is only prepared of Acid *Vitriol*; yet I thought it neceſſary alſo, here to publiſh, that Oyl of *Vitriol* may be prepared divers ways, ſo as one or another may prepare it, this way or that way, as he pleaſeth. For the common and vulgarly known Oyl of *Vitriol*, ſuffers it ſelf (by the help of *Sulphur*) to be eaſily tranſmuted into a Sweet Stone: Becauſe *Sul-*

phur alone is endued with Power of edulcorating all Corrosives, and of Coagulating them into such a Stone, or Salt, by the benefit of which, Wonders may be done, both in *Medicine* and *Alchymy*. Philosophers do indeed persuade us, that, out of *Vitriol*, an Oyl of a Blood-Red-Colour may be extracted by Art, with which, White Metals may be tinged into Red: But the way of Preparing this, they described not. This is that, which is most studiously sought by the Adorers of the Chymical Art, but hath hitherto been found by very few; and therefore is generally thought, by almost all Inquisitors, to be impossible, whatsoever Philosophers have writ thereabout, and how clearly, and plainly soever described it. *Basil Valentine* doth, with *Paracelsus*, call this our Oyl of *Vitriol* tinged with a Red Colour, the Blood of the *Green Lyon*; but *Bracesius*, the Wood, or Tree of Life; *Virgil*, a Bough, or Branch, plucked by *Proserpina*'s help from the concealed Tree: Also, *Ovid* useth divers other Expressions, in the Description of this Tincture.

This Red Oyl suffers it self to be Coagulated into a Stone, not Corrosive, as well as the Common Oyl: But this Coagulate is totally Red, and the other is White only. Therefore, there is a necessity, that the difference of both be known. For of both these, what the White is able to do, the Red cannot do; and what the Red can effect, is impossible to be performed by the White. That Red Oyl tingeth white Metallick Bodies into Gold, and so tingeth white Chrystals into Gems of all kind of Colours, (according to the Operators Pleasure) as, in Elegancy, they become altogether like to the Native. But the White tingeth not, because it self wanteth Tincture, which notwithstanding may be procured to it: Yet it extracts the Tinctures from all precious, and more ignoble Stones, and by them is so tinged, as it is, thenceforth able to tinge white Metals into Gold, and white Chrystal into beautiful Stones of every Colour, and that with as excellent Splendor, as their Brother, the Ruby, enjoys. In a Word, our Salt of Metals, or Stone of Philosophers alone, and *per se*, is so great a particular Ruler throughout the whole Kingdom of *Chymistry*, as, by amending, it transmutes all imperfect Metals into Gold, and common Stones into precious: Yet unto it, is denied Ingress into Vulgar ☿. But the fixed ☿ of Metals will abundantly perform that; as is before abovementioned. Now, as touching this *Mercury*, which those imperfect Metals, *viz.* ♄ ♃ ♂ and ♀, contain in themselves, our *Sulphur* is so very fit for tinging that, as, for that purpose, there is no need of other help. Therefore it is most certain, that the Salt of Metals obtains Priority in the Chymical *Laboratory*. One thing I am freely willing to discover, *viz.* this: If any one would take away the fixed Tincture, or tinging Soul from precious Stones, as *Granates*, *Rubies*, *Saphires*, *Lazure* Stones, and other common Stones, and add to them also, a small part of pure Silver, our Magnetick Salt will extract the Tincture from the Stone, and at the same moment, in which it extracts the same, incorporate the added Silver, with the Tincture, and tinge the same into Gold: So, as it will affect a Man with admiration to see, that in one and the same Subject, should be both an attractive and expulsive Virtue. Perhaps hence, that most ancient Philosopher *Pythagoras* drew his Opinion; for he believed such a Transmigration, and taught, that the Soul, as soon as it passed out of the mortal Body of Man, it entred into some other near adjoyning Subject, and there inhabit'd. Indeed they, that labour in Metals and Stones, do find such a Process; but with the Soul breathing out of the Body of Man, the matter is far otherwise. For here Bodies are not required, but Spirits, which at the hour of Death receive the Souls of dying Men, and convey them to Places by GOD appointed. According as the Man hath lived, either Well or Ill, so those Spirits will act at the end of Life, each according to their Office; so as, the Souls of pious Men shall be received by Spirits of Light; but impious Souls, by the Spirits of infernal darkness. In the Mortification of Metals and Minerals, Philosophers also want not their peculiar Spirits, which receive and transport the flying Souls of Metals and Minerals. Touching which Transportation of Souls, we made some mention above, where we treated of the Fixation of Metals. Also * this Traduction was highly esteemed by ancient Philosophers, especially by *Neusementius*, who said: By this Power, *viz.* *By the Spirit and Salt of the World, we deliver the Souls of the Dead from the Prison of Hell.* Therefore, whosoever shall be well Skilled in this kind of operating, he will be able to do Wonders in this Chymical Kingdom of Metals. For if you add the Spirit and Salt of the World to any Metal dissolved, and by Retort distil the Mixture, they will carry over with themselves, the most pure part of the Metal, *viz.* its tinging Soul, and leave nothing behind in Hell with *Pluto*, but the gross and unprofitable Body. Wherefore, whosoever can rightly separate that transduced tinging Spirit of Metals, from the Spirit of the World, he will absolutely be possessed of a fixed Tincture: Because, that strong transporting Spirit doth also fix the volatile Soul of Metals, and render it constant in Fire. And, although that Subject was most volatile, from which the Tincture was distilled by the Salt of the World, as by one only Distillation from common *Sulphur*, *Auripigment*, *Cinnabarine Sulphur*, and the like; yet you will acquire a Tincture, constant in all Fire, not only for Humane and Metallick Bodies, but also for Gems. So very potent Virtue is latent, in these abject Subjects, and in the Spirit and Salt of the World, rejected by the great Troop of proud Men. But the Method of using such Pearls legitimately, for the Transduction of Metals, had need to be Sealed up with the Seal of the laudable Philosopher *Harpocrates*, lest so great a Treasure be cast under the Feet of sordid Swine. Touching a like *Compendium* of fixing Volatile Metals, and Minerals, we (GOD willing) purpose hereafter to teach more at large.

* *Transduction.*

Now, we having generally understood, what our Salt of Philosophers is able to perform in the Transmutation of Metals, I judge it not amiss, to discover; how great, profitable and powerful Faculties, it is also endued with, even besides the Transmutation of Metals. But here, by the way it is to be understood, that our Salt of Philosophers is insignized with many other Names, which ancient Philosophers imposed on it, not without pregnant Reasons. For, according as they beheld the various Wonders they were able to perform by the help of that; so they also gave Names unto it; sometimes, they called it the *Soap of the Wise*; another time, *Hercules* or the *Herculean Key*; sometimes, the *Key of the Philosophers*, &c. and all this by reason of its exceeding great Potency and Virtue, whereby it always rendred it self worthy of one or other of these Names. *Why did they call it, the Soap of the Wise?* Because it renders those Metallick Bodies, which are washed with it, most purely white. Indeed Washer-women have their Soap made of Oyl and *Lixivium*, with which they wash filthy Garments unto White-

Whiteneſs. *Leather-Dreſſers* uſe a kind of Soap to cleanſe their Skins from all Impurities. Alſo, *Fullers* have their cleanſing Earth, with which they well know, how to purifie their ſullied Cloaths. Nor do *Apothecaries* uſe their Herbs for Medicaments, before they have waſhed them in clean Water. So alſo, common Chymiſts ſo long waſh impure Metals, by dulcified Corroſives, till they paſs into ☉ and ☽. But moſt experienced Philoſophers waſh Gold, until it becomes Tincture. Hence is that kind of Soap, which they uſe for waſhing, called the *Soap of the Wiſe*.

But ſome may object, ſaying: I contradict my ſelf; becauſe a little before, I ſaid, Gold and Silver were Homogeneal, and did not at all participate of Heterogeniety. To whom I anſwer. I confeſs, I did ſay ſo, yet I would be underſtood, to ſpeak ſo with reference to thoſe common and known Waters, with which, otherwiſe Chymiſts do generally work upon their Metals, diſſolve them, ſeparate them one from another, and waſh them. Becauſe on Gold and Silver no change falls, but they always remain in one and the ſame Eſſence, according as they are progenited by Nature, therefore, I ſaid ſo. And the Reaſon, why it is thus, is, becauſe *Aqua Regis*, *Aqua Fortis*, Spirit of *Vitriol*, or other Corroſive Waters, are not true Keys, endued with the Virtue of penetrating into the heart of Gold, or of opening the moſt firm Cloſure of the King. For although they do very much corrode Metals, and diſſolve them, yet every Metal remains in its Eſſence, without any Separation of parts. But on the contrary, our *Menſtruum* is a ſweet Key, far more conducible, and better than Corroſive Spirits, and therefore, by Philoſophers is not undeſervedly called, *the Key of Philoſophers*. For there is nothing ſo cloſed, but this can open it. *Our Royal or Capital Key is a Corporeal Spirit, or a Spiritual Body*, which, without any injury to it ſelf, paſſeth not only through Metals, but alſo through the hardeſt Gems, and extracts the fixed Tincture of them, leaving their Bodies white; which exceeded my comprehenſion, the firſt time I beheld it with my Eyes.

Therefore, as this Spirit is endued with Power of extracting Tincture, even from any of the hardeſt *Adamantine* Stones; ſo, it is alſo able to introduce Tinctures into the moſt hard Stones; and that by reaſon of its penetrative Power. Our principal Key is that *Hercules*, which cut off the ſeven Heads of the immenſe *Hydra*. By ſuch an *Herculean* fortitude, *Perſeus*, the Son of beautiful *Danae*, ſuffocated the ſtrong unſatiable Whale or Sea Beaſt, and freed fair *Andromeda*, whom he took to Wife. Whoſoever deſires to know more of theſe, let him peruſe *Ovid*, in whoſe *Metamorphoſis* he may find our Key of Philoſophers accurately deſcribed. Yet his Words can be underſtood only by thoſe, to whom the Art is already known: Otherwiſe, it will be impoſſible, from Fables, to extract the ſufficient knowledge thereof. It is GOD only, that gives light to underſtand abſtruſe things; namely, to thoſe, who fear, love and adore him: More of which, you may find among pious Heathens, than among the Slanderous Malignant, falſe, Chriſtians of this time.

This Fable of *Ovid*, I explained before ſome of my intimate Friends; and beſides, before them ſhewed the Impregnation of *Danae*, *by Jupiters Golden Shower*: Yet they gave no credit to this Demonſtration, becauſe the thing ſeemed ſo vile. Would you hear it? I ſet a narrow-mouthed Glaſs Body, with a flat bottom, upon a Table, and from above through the ſmall mouth, I poured *Danae*, King *Acriſius* his beautiful Daughter, into the Glaſs or Tower; then, by the Counſel and help of *Jove*, I formed a Golden ſhower, which (through the Roof, that is, through the ſmall mouth of the Glaſs) I inſtilled down, into the Boſom of the aforeſaid *Danae*, which ſhe ſpontaneouſly received, and was thereby impregnated, and quickly brought forth her Son *Perſeus*; who afterward, carried upon the winged Horſe *Pegaſus*, ſuddenly helped the fair *Andromeda*, and, freeing her from the Jaws of the Sea Monſter, took her to Wife. Afterward, he ſlew the ſtrong and unconquered *Gorgons*, and got the † Golden Gardens. If any one looks upon this Fable, with the right Eye of his underſtanding, he will find, that *Ovid* hath ſo clearly and perſpicuouſly deſcribed our *Hercules*, or Philoſophers *Key of Keys*; that every one, having knowledge of our Work, in reading this muſt neceſſarily be amazed, to ſee the whole Art ſo evidently detected, and as it were expoſed to ſight. But its being diſcerned and underſtood by ſo few, muſt be aſcribed to the defect of their internal Sight, and the darkneſs of their Sins, in which they have involved themſelves, and are ſtill reſolved to abide in. Therefore GOD, according to his Juſtice, deſervedly permits ſuch Slaves of Avarice and Pride to ſtick in perpetual Blindneſs, to grope for, and in vain ſeek, the way of eſcaping thoſe Evils. For here, the hard is Softned, the ſoft is Hardned, the fixed Volatilized, the Volatile fixed, the Bitter Corroſive dulcified, but the ſweet Converted into a Key, opening all compact Encloſures. More touching ſo great a Myſtery, I ſhall not at this time relate. But, to whomſoever GOD ſhall grant this principal Univerſal Key, he may, according to his Hearts deſire, go whither he will, nothing can be able to reſiſt him: For which ſo great Benefit we owe thanks and Praiſe to the moſt wiſe GOD, for ever, *Amen*.

† *Gold-bearing*.

Alſo *Virgil*, in a few *Heroick Words*, evidently enough deſcribes the way of preparing our Red Oyl of *Vitriol*. Therefore I thought it worth while to inſert his Words alſo, that he, to whom GOD ſhall give the Bleſſing, may the better underſtand the occult meaning of the Poet.

Conſider firſt, what here is to be done.
A Golden Branch, with Leaves of Gold thereon,
Upon a Tree concealed groweth. This
To the infernal Juno *ſacred is*:
But the whole Grove, with diſmal ſhades of Night
Obſcure and keep the ſame from Humane ſight.
And till ſome one ſhall take down from the Tree
This Golden Branch, *there can no Entrance be*
Into Earths Caverns. Beauteous Proſerpine
Ordained hath, that this rare Gift divine
Shall brought be unto her. No ſooner is
The firſt Branch cropt, *but in the place of this*
A ſecond Sprouts, and that moſt pure and fine,
As did the firſt, with Golden leaves *will ſhine.*
Therefore firſt view it well; when rightly known
This Branch *is unto Thee, then with thy own*
Hand crop the ſame: For it will follow Thee,
If Thou by Fates *for this Work choſen be.*
If otherwiſe, no Humane violence,
Nor ſtrength of Iron, force it can from thence.

Virgil here calls *Vitriol*, a concealed, that is, a ſhadowed Tree; adding, that by the help of *Proſerpina*, *Pluto*'s Wife, but one Branch can be cropped by him, whom Fortune ſhall favour; and that it is willing to be plucked off by any Skilful Man deſirous of the ſame. Such a Branch is conſecrated to *Juno*, &c. We know

Juno

Juno, according to Poetical Fictions was the Wife and Sister of *Jupiter*, but *Proserpina* the Daughter of *Jupiter* and *Ceres*, or (as some say) of *Isis*, whom *Pluto* the God of Hell stole away from her Parents and married her. From all which it clearly appeareth, that this Golden Branch sprouting in the green Tree of *Vitriol*, could not be cropped, or obtained without *Proserpina*'s help. Therefore if any one would crop such Golden Boughs from like shadowed Trees, he must learn to know *Proserpina*, and consult with her; becaufe she only can profit him, and prevail with her Husband, to wax the more hot in his infernal Sweating stove, that thence into another place may ascend a Spirit or Oyl of a Blood-Red-Colour.

But this is to be considered accurately, lest this Work, like many other of our Undertakings, be frustrated. Therefore GOD is to be prayed to for his Blessing: For if the Benediction of GOD be not present, all endeavour will be vain; as I have more than once experienced. Although I did demonstrate our helper *Proserpina*, to some of my loving Friends, and taught them how to obtain and rightly use her; yet they were all destitute of so good Fortune, as to elaborate it as it should be elaborated: Yet at length more accurately hitting the Mark, their work succeeded happily twice or thrice, but never afterward.

From which, being so evident, it is plain enough, that such *Arcanum's* are so preserved by the All-seeing Eye of the Divine Providence, as it is never permitted to all Operators promiscuously, that every of them should attain to the highest Science, and thenceforth the Good given be perniciously abused. Wherefore, although one Man communicate any famous Secret to another; yet, if GOD be not favourable, he can never prepare the same, but shall lose his Labour and Charges, spend his time unprofitably, and instead of a Golden Harvest, reap nothing but Trouble and Grief.

Hence they drew their Original, who writ of the Secret ripening Fire. *Our Fire, before Coagulation, always burns in our Glass, but externally not.* It is sufficiently manifest, that Philosophers, by their *Secret Fire*, understood Oyl of *Vitriol*; and that their Fire, is only Fire before Coagulation; after that, no more so, but a sweet Ripening Stone. Therefore they add, that before Coagulation it is Fire, but after Coagulation not so. Aptly with this agrees that Writing of ancient Philosophers. *Visitabis Interiora Terræ, Rectificando Invenies Occultum Lapidem Veram Medicinam.* To which Monument of ancient Philosophers, we may fitly subjoyn this sutable Poesie, making for our present Purpose, and expressing the same in few Words.

Dissolve the Fixt, and make the Fixed fly,
The Flying fix, and then live happily.

In these few Words are compendiously contained, all whatsoever I have largely written in this Treatise.

Moreover, our Salt of Philosophers, besides its being a *Medicine*, and fit for Transmutation of Metals, is also endued with other famous Virtues, of which at this time I cannot forbear to write. Philosophers have written, that their Key of Keys doth indifferently open all closed Bodies, and that it is endued with a Virtue, breaking most hard and Adamantine Stones, and taking from them their inclosed Treasure; for acquiring which, there is nothing at all in the whole Nature of things given, except this our Key, by help of which the most firmly locked Inclosure may be unlocked. As for Example. A *Granate* is a Stone of so great hardness, as although it may easily be reduced to Powder, yet it can never be corroded even by the sharpest *Aqua Fortis*, nor dissolved, nor can it be Anatomized. Wherefore, although these Corrosives, vulgarly known, prevail not against this excellent Stone, (which visibly in it self contains a noble Tincture of Gold, and also is not a little impregnated with invisible Corporeal Gold, as plainly appears by its weight: For it is much more ponderous than all other precious Stones, or the more vile small Stones) but are judged as unprofitable for this kind of Labour; yet our *Sweet Salt* possesseth so potent a Faculty, as it can easily open the same and take from it all its Treasure; in so much, as if there were but this only use of it, (and no other like, better or more excellent were known) it would abundantly satisfie every honest Man, to live amply therewith, and to maintain his Family with great Tranquillity.

Behold I present to you, yet another Royal Experiment, which I have not long since effected, by the help of our Red Stone, in the following manner.

One day I cast our Red Stone upon Gold, in Flux, only for a Tryal, whether by the help of that, the Gold would be tinged with an higher Colour; because I found, that Silver had took a yellow Colour from the same. But after I had poured out the Mixture, I found what was contrary to my Hope. For it was so far from exalting my Gold in Colour, as on the contrary, it took from the same almost all its Colour, so as it was white like Silver. At first, I was not a little troubled, that, contrary to my Expectation, I should work so unhappily. But returning to my self, I begun to think, whether this my Red Stone (being, perhaps made of Steel) was not that *Chalybs*, [or Steel] which *Sandivogius* so highly extolled in his Writings, and said, it could extract from Gold its Tincture. But since, by reason of other Business intervening, I had no leisure to proced further in the Work begun, I was constrained to leave the whole for some higher Experience to another time. Yet I cannot but wonder, that our Key of Keys should so readily unlock every Closure of Gold, and be able to spoil it of its Royal Soul: Whereas otherwise, Gold according to the Sayings of all Philosophers, (as in very deed it is true) and according to the common Opinion of all other Men, experienced in Chymical Labours, is accounted to consist of such Homogeneal parts, as are difficultly separable. If the most wise GOD prolong my Life; and also grant Time and Opportunity of making further Tryal, I will spare no Labour or Cost to find out that *Arcanum*, until by the gracious help of GOD'S assistance, I shall become the Master of that Art of Arts. For now unto me the Gate of the Royal Closet is opened (I would not be envied for what I now say) by our *Herculean* Key in such a manner, as, I doubt not, but in a short time (unless the supream Deity, which I have no cause to fear, notably resist me) to obtain the Kings Crown made of a Carbuncle, and be able to distribute the same among the needy, to relieve their necessity. To which my hope, let the most wise GOD give a Blessing, so, as the Event may answer my Desires, *Amen.*

Moreover, Philosophers say, that whosoever obtains their Stone, can so qualifie Glass, as, if it fall, it shall not break, but be found lying unbroke, like Metal. Which indeed I have often read, but could never believe, it was so to be understood according to the Letter. Yet after GOD, by his Grace, had conferred

ferred on Me our Wonderful Salt, for Curiosity sake, I could not forbear to make an Experiment, to know, whether what was written thereof was consentaneous to Truth. Therefore, I took a little broken Glass, melted it in a Crucible, and then cast upon it only a very little of our Salt, which it continually took in, and thence received a white Colour. I poured out the Mixture, and trying, whether it had passed into another than its first Nature, I found my Glass had received a new Disposition, and became flexible like hardned Steel Wyer, and after flexion came to its first form: But after many bendings, to and again, it at length broke. Whence I learned, that it was no Fable, but plainly possible by Art to prepare Glass so, as it may be no less flexible, like Metal, than it is transparent. But since I have not had Opportunity to make further Tryal, and cannot yet absolutely profess my self an Artist in that kind of Work; yet, I can say, that what others have affirmed thereof, is not estranged from Verity. Therefore I must wait, till Time (with the favour of GOD) give me further Experience thereof.

Also, touching the Stone it self, Philosophers write, that it qualifies its Possessor so, with Lightness and Cheerfulness, that he can, like a Bird, fly up on high from the ground; which is a thing so much repugnant to Nature, as no Credit can be given to it, unless it be interpreted Hieroglyphically, Allegorically, or Enigmatically. But that it greatly exhilarates him, who by the benefit thereof can effect the aforesaid Wonders, is very easie to be believed. For in my self I have found the like Exhilaration, when I have, with these my Eyes, made certain very great Proofs and Experiments by the help of that. When I lay, for four years, continually sick, and during that time, exercised my mind with various Speculations, making some Proofs, I at length found the Truth, and understood that this wonderful Salt, being tryed upon Metals and Stones, did most exactly agree with the Philosophers Description of it: Then, I say, my whole Nature, because of that, was astonished, and daily so notably reduced to a better Constitution, as I can never sufficiently admire the Grace of GOD, and return due Praises to him for so great Gifts. For I, who by reason of my Sickness, could never rise out of Bed before Noon, could afterward rise betimes in the Morning, and go into my Laboratory. Also for a long time before, I could digest neither Flesh nor Fish, but was constrained to live with Bread and Wine only; yet now, (thanks be to GOD) I am able to eat some small Portion of Flesh and Fish, together with other Meats. Likewise for above a whole Year, through weakness of Body, I could scarcely write a Line or two, so as in two Years space I committed nothing to the Press: But now, GOD, the Giver of all good Gift, hath made my hands so ready for Motion, as I sing to him incessant Praises. Without that new refreshing of Strength, this present Treatise could never have been published. And this so great Good befel me from no other Cause, than from GOD, and this precious Stone.

Therefore, whosoever is desirous to partake of this great Blessing of GOD, let him not come to Me, unto whom is given no leave to Communicate; but let him come to the Love of GOD, and draw that laudable Good from him, as from the most limpid and living Fountain: Because, it is to found with him only, not with Men. If a Man humble in Heart, and void of Hypocrisie, hearing this, will follow my Counsel, he may perhaps find a prosperous Event according to his Wish: If otherwise, adverse and contrary. For GOD is not wont graciously to regard the words of the deceitful, but the Hearts of candid Men.

Many other such things might be produced, touching our Tinging Stone: But no necessity persuades to expend time thereabout. Enough is spoken. For whose Eyes soever GOD shall open, he will on every side see so many things sufficient for him, as not to need any further Information. All things are clear to the clear-sighted, which appear dark to the Blind. GOD only is the Light, and all, who are near to GOD, are by him so illuminated, as they can see. But the more remote any Man is from GOD, the nearer will he be to the contrary of Light, which is Darkness. Therefore, whosoever desires to be illuminated with the brightness of Divine Light, must fly from Darkness, which is to be shunned. For Darkness and Light are inconsistent in one and the same Subject; which is a thing accurately to be observed by every Reader.

A COROLLARY.

WE have, in this little Treatise taught, that the Salt of Metals is prepared of *Vitriol*, and that there is a difference to be observed, *Viz.* this,

Common Oyl of *Vitriol* doth indeed suffer it self to be Coagulated into a sweet Salt or Stone, wherewith (particularly) vulgar Metals are amended, and Tinctures extracted from Gems, although it wants a tinging Virtue: But Metals may also be tinged by the Coagulated Red Oyl.

We likewise shewed, that you cannot get this Red Oyl, without the help of that Goddess *Proserpina*. Yet by the way, it is to be noted; that the aforesaid *Proserpina* is no other, than a white Sulphureous Salt, which added to the *Vitriol* causeth the Tincture of *Vitriol* to ascend in Distillation. That, after it shall be duly Coagulated into a Stone not Corrosive, manifests such Effects, as we have ascribed to it. I also thought good to advise, that our Oyl of *Vitriol* in its Preparation requires great Care and Industry, that the Tincture may be made Rich enough: For otherwise, it discovers but little Virtue in Transmutation. Also you shall never get so great a quantity of that Red Oyl, as will satisfie the Common sort of covetous Men: Because that comes not till at last, after all the White is ascended. But he, that can get a large quantity of the White, will not trouble himself to get the Red: Because the White also, by the help of *Proserpina*, may be converted into Red. Which if it were not so, the Saying of *Virgil* could scarcely be found true, *viz.* that with the hand is readily to be cut off, not one Branch only, but many other, if Fortune shall so far favour any Artist. Therefore, I forbear to write more at this time. Let him, who cannot content himself with these here written, search the Monuments of Philosophers, writing, that there is such an Art, by the benefit of which, with one only Pound of Coals, a whole Pound of Oyl of *Vitriol* may be distilled. Yet such an Artifice must not so soon be spread among the People. To whom soever GOD reveals the same, he may prepare it, according to his own desire; if it be otherwise, let him comfort himself with this Meditation of Patience, *viz.* that he was not worthy of so great Gifts. With these, Reader, I bid you Farewel, and commend to you the Protection of GOD.

THE END.

A

Short BOOK

OF

DIALOGUES,

OR,

(Certain) Colloquies of ſome Studious Searchers after the Hermetick Medicine and Univerſal Tincture.

Written for the Sake of the Lovers of Hermetick Philoſophy.

THE

PREFACE

TO THE

Well-minded READER.

I Was formerly minded never to have publiſhed theſe Three Dialogues, but only to have made ſome of my good Friends, and ſuch as had well deſerved at my hands, here and there, partakers of the ſame. And upon this Account I permitted ſome [of them] to Copy them out, but they abuſing that Curteſie [of mine] whereby they received them, did make others of their own Friends too, enjoyers of the ſame, contrary to my Will and Intention; and ſo it happened, that they became Common, and being on this wiſe often Coppied out, there crept in amongſt them (as indeed uſually falls out in ſuch Caſes) abundance of Faults or Errors, and the ſenſe [and true meaning] of my Words were conſtrued in the worſer Part. Which thing when I perceived, that it would more diſadvantage than profit me (eſpecially ſeeing, that ſuch a work [thus Copied amiſs] did neverthelſs paſs under my Name, and was adjudged by others, as really mine) I deemed it, expedient, of two Evils to chuſe the leaſt, and to have regard to mine own good repute, and to publiſh it in mine own Name. But yet, not with an intent of getting my ſelf ſome eminent Fame, as if I were wiſer than others, and to have it thought, that I had more knowledge and experience than many others have; but rather, that the incredible Works of the omnipotent God, and his great Wonders, might be laid open and made known, to the infinite Glory of his Name. In the ſetting down of which, I do produce only ſuch things, as my ſelf have wrought with mine own hands, and can even yet demonſtrate by a certain and undoubted Operation, (by Gods help) at any time.

But yet, I would not have any one thus to underſtand me, as if I had already wholly and compleatly

Part. III. before pag: 23.

in de Dialogus ·

pleatly finiſhed the whole Operation, and had advanced it to a due, and throughly perfect, end, No! I cannot arrogate to my ſelf by any means, any ſuch matter. Thus much I only affirm, that if any one ſhall (in his Operation) follow the bare literal Deſcription of theſe Labours, he will without any Error arrive, ſo far as I my ſelf am already come, but yet with this Proviſo, that he knows the true Salt of the Philoſophers, and the uſe thereof; And as for what remains, [unfiniſht] I commit unto God to beſtow a proſperous Succeſs: And this one thing I entreat, that every Body accept of the things I have here written, with the ſame mind I wrote them, and that he take in good part my ſincere Endeavours of deſerving well at his hands.

The Explication of the annexed Figure belonging to this Treatiſe, noted with theſe Words: *Inde Dialogus.*

IN the four principal Points of the Circle (ſuppoſing two tranſverſe lines were drawn, through the Center, to the outward Circumference) are placed the Characters of Sol, Sulphur, Lune, Salt.

Round the outmoſt Circle, are placed theſe Words: Conjoyn in one, Sol, Salt, Sulphur, Lune.

About the next Circle: And thou haſt as great a Treaſure, as Heaven can give thee.

Within the Third Circle: The Philoſophers Function, is of Contraries, the Conjunction.

About the next Circle: The Concentration of Homogeneals, is the Separation of Heterogeneals.

Within the inmoſt Circle: Sol, Salt, Sulphur, Lune.

The Firſt Dialogue, or Conference, betwixt two Lovers of Hermetick Medicine, deciphered by the Letters, A. and B. the laſt of which hath had a proſperous Succeſs on his Labours, the other not; and therefore craves of this laſt (viz. B.) a Manuduction to the Work, whereby he is rendred Maſter of his deſire.

B. A Good health to you, my Friend! What's the matter with you now, that you are ſo ſad, and even loaden with Cogitations, and mumble to your ſelf about I know not what?

A. *Oh, my Friend! I wiſh you the like very heartily; and am glad that you come ſo very ſeaſonably, and at ſuch a time, as I was juſt thinking on you, and moſt earneſtly wiſhing your approach; Witneſs your own Writings, which I do here turn over with my hands and my mind, but yet they are ſo very obſcure, that I cannot worm my ſelf [as I may ſay] out of them, [or underſtand them] though I apply the utmoſt of my Endeavours to underſtand them. I have likewiſe read over and over again, the Writings of other eminent and belief-deſerving Philoſophers; ſtill hoping, that I ſhould yet at length attain to the knowledge of the Truth: But alas, (the more's my grief) all that I find is only this,* viz. *that I hold in my hands the ſlippery Tail of a ſlippery ſmooth Serpent, [or Ele] which ever now and then ſlips out of my hands, and doth more and more defile me. I have therefore reſolutely determined with my ſelf, that, unleſs God doth ſhortly ſend me ſome good Friend, who may lead poor me out of ſuch a notable Labyrinth, I will throw all my Books, all my Inſtruments, and all ſuch matters which I have beſtowed ſo much time about, in vain, and loſt ſo much by, into the Fire, and Sacrifice them unto* Vulcan, *that ſo I may be rid of the tedioufneſs of my fruitleſs Labours, and unprofitable Cookery. But yet if you would be but ſo pleaſed, I no ways doubt, but that you might by a few words [and Directions] reduce me out of the ſnares of ſo many Erroneous paths, and hedged up ways, into the right path: For I well know, that you have beſtowed your whole Age, your whole Study, and all your Labours and Endeavours, about ſuch great Secrets, and have by the Divine aſſiſtence obtained the very Truth it ſelf. And therefore I do moſt humbly beg at your hands, that you would not leave me deſtitute of your help, but that, according to your inbred Goodneſs and Courteſie, you would ſuccour me, your Friend, with ſome brotherly inſtruction, and Manuduction. Which if you either will not or cannot do, I muſt even conclude, not only upon throughly doubting of the Truth and poſſibility of this Art, but withal, on a firm perſuading my ſelf, that thoſe Writings, which*

which are ſo ſtuft with the Promiſes of golden Mountains, are nothing elſe but mere Old Wives Tales, and frothy Speculations of idle Men, and vain Dreams, though proceeding from Men of ſo great Eſteem.

B. Whats this, I hear thee utter? I could never have believed you, to have been of ſuch a broken and dejected mind. What? Would you contemn the Writings of the Philoſophers, and ſlight them, becauſe they are above your Capacity, and too hard for your underſtanding? Tis a wicked thing, to entertain ſuch a thought, much more to utter it. I would have you, rather to perſuade your ſelf, that you are not as yet worthy of the Secrets and Gifts of ſo great worth: For though a Man ſhould torment himſelf with abundance of hard Labours in this World, and ſhould afflict his Body with unceſſant Sweating pains, yet would he not effect ought without the Bleſſing of God. Do you not know that ſaying of *Paul*; *Tis not of him that Wills, nor of him that Runs, but of God alone that ſhews mercy.* You ſhould therefore reckon your ſelf amongſt the number of thoſe, that have run in vain, nor hath God injured you at all. What! does not Chriſt ſay, *Not all that ſay unto me, Lord, Lord, ſhall enter into the Kingdom of heaven, but they only who do the Will of my Father.* Examine now your ſelf, and ſee how the Caſe ſtands 'twixt God and you. The beſtowing of ſuch great things muſt proceed from God, and not from the Philoſophers. The Philoſopher may indeed write down the Truth, but yet it is not in his Power, to beſtow upon thee the Divine Bleſſing, which is the very hinge on which all good things depend. Secrets of ſuch great moment are not the Gifts of Men, but of God, who beſtows them on whomſoever he pleaſeth.

A. *In good time! Is this the Comfort and Inſtruction, which I begged at your hands? I did not requeſt, you to be my Father Confeſſor, to hear my Confeſſion of my Deeds, but rather that you would help me, being ignorant and unskilful, by ſome good and profitable Manuduction and Inſtruction: For I well enough knew, that wicked Men are never Maſters of ſuch great Secrets, nor will I rank my ſelf amongſt them. Be pleaſed but to regard my ſuit, and only ſhew me an entrance, whereby I may enter into the right and Kingly way: And as for praying to God, and Labouring without ceaſing, leave the Care of that to me: I hope, that God will not deny his Bleſſing upon my Prayers and Labours.*

B. Well! ſince I perceive you to be ſo throughly bent, with your utmoſt ſtudy and unwearied preſſing on, after ſuch an eminent thing as this is, I cannot but ſhew you that way, which I my ſelf have walked in, and that too, home to the very place which my ſelf am come unto. Verily, I ſee the promiſed Land afore my Eyes, and do daily view its Coaſts, nor do I doubt, but that I ſhall ſhortly enter thereinto, and have the Fruition of its moſt pleaſant Fruits, if no impediment debar me of ſo great an happineſs. And as concerning your ſelf, ſeeing that you are nimbler of your Feet than I am, there's no doubt but that you will arrive thereunto, even aſſoon as I my ſelf. But yet, pray firſt declare unto me, about what things it is, that you have ſpent your Monies, your Labours, and your Precious time and all to no purpoſe; that ſo I may (as much as in me lies) the more conveniently reclaim you from your Wandrings and Errors into the right way. Tis in vain for him that is ſick, to expect help and ſuccour from the Phyſician, if he does not ſhew the place of his Dolour and Grief. Confeſſion is a Medicine to him that goes aſtray. Confeſs therefore the Truth, that I may hear, by what things thou haſt been miſ-led into ſo many Errors.

A. [*Alas, Sir,*] *I could not reckon up all, in Order, though I ſhould have time enough of ſo doing. But your own time, which is far more precious, does not permit, that it ſhould be ſpent in hearing my fooliſh Labours. Beſides too, the remembrance of ſo many Labours in vain, and of the loſs of not only ſo much Time but Expences too, cauſeth a loathing in me, the very remembrance of which I abhor, much more to make a long rehearſal of the ſame. You may therefore eaſily gueſs, that by my inſiſting upon the bare Letter only of the Philoſophers writings, and not underſtanding the ſenſe and meaning, I have erred from the right way, and have headlong hurried my ſelf into ſo many Intricacies and Errors. I have ſearched into Vegetables, Animals, and Minerals, becauſe the Philoſophers write, that their Stone is Vegetable, Animal, and Mineral; but I ſee, that I have not had under my hands the true Matter. For if there does appear in any* [*of theſe Matters*] *the Crows head, yet the other Colours which the Philoſophers make a deſcription of* (*as the Dragons Blood, the Peacocks Tail, Virgins Milk,* Coagulum, *or Curdling, and principally that Red and Fire-abiding* Salamander) *did never appear* [*to my view.*] *Or, if theſe* [*Signs*] *of* Sanguis Draconis, *or* Lac virginis *appear to ſight, in ſome other Matter, yet notwithſtanding the other Colours, and other Signs, which the Philoſophers make mention of, did never diſcover themſelves* [*to my view.*] *What Labours ſoever I have uſed, and whatſoever matters I have dealt in, I have even Laboured in vain, and loſt both my pains and Expence, and never have received any good from my laborious Operations. Hereupon I did at laſt even almoſt throughly perſuade my ſelf, that it was an impoſſible thing, that, out of one Matter, and by one and the ſame Labour, one Colour ſhould orderly ſucceed another, and become viſible to the ſight, by the bare help of an external Fire, as for example, firſt of all, in the putrefaction, the Crows head; then the Peacocks Tail, then the Dragons Blood,* Lac virginis, Coagulum *or Cheeſlike Curdling, and at laſt the fixt* Salamander. *But foraſmuch as it appears to me, by the reading of your Writings, that you have orderly met with the ſight of all thoſe Colours in your Labours, in ſuch manner as the Philoſophers have deſcribed the ſame, I do firmly believe, and give Credit unto your Sayings, as unto a Man that makes Conſcience of his ways, ſuppoſing, that you would not write ſuch things unleſs you had wrought them with your own hands, and could even yet perform them at any time. I only beg your help in ſhewing me the true matter, and the Key thereof, that I may ſo order the Buſineſs, as to cauſe the Viſibly appearing of one Colour after another, in one Glaſs, and by the bare help of one only Fire; if you do but thus much for me, you may be confident that I ſhall be the moſt contented Man* [*alive.*] *Nor do I doubt, but that as touching the remainder, as Multiplication, Projection, and ſuch like, I ſhall find out thoſe Operations well enough afterwards, by mine own ſtudious Search, if I can but once hit on the entrance of the right, true and Kingly way.*

B. [Hold a little, and] do not aſſume ſo much unto your ſelf, and think that the things which are ſo eaſily ſaid, are with as much Facility done. Have you not Read in *Bernhard Treviſan*, that a certain [Friend of his] had that great Secret as well as himſelf, only he knew not how to multiply it, nor would *Bernhard* reveal the ſame unto him, as having the ſelf ſame Books, out of which the ſaid *Bernhard* got the knowledge of Multiplication, himſelf. But be it as you deſire, and ſeeing you requeſt no more from my hands at this time, but only the matter and ſome Key; I will ſatisfie your requeſt, as far forth, as the time and occaſion will at preſent permit.

Attend

Attend therefore with diligence to those things which I shall say unto you and such things they shall be too, as unto which you may boldly give Credence. I will not (according to the Custom of many) seduce you, nor will I reveal unto you ought else, but what I have experienced by the Labours of mine own hands: And if you follow the guidance of the bare Letter it self, you will not err, unless God will not permit you to proceed, [but] throw some peculiar impediment and lett in your way.

As touching the matter, which the Philosophers have made that Universal Medicament of, I find that it is not merely *One*, but *Divers*, and this is clearly evident from the Writings of the Philosophers, who openly hint unto us, that one of them used this way and matter; another, that, and yet at length became Masters of their desire notwithstanding. From whence it necessarily follows, that the different matters, of which is made one and the same thing, are not unlike in their more inward parts, but alike, though they do not appear so to be, as to their external hue. For it is a thing possible for two, three, or more things to differ much, [from each other] as to the outward form and shape, whereas notwithstanding in their inward parts, they are so agreeable to each other, as that the self same thing may be produced from the one as from the other. Take, for an example of this thing, the *Seeds* and *Roots* of some Herb, the which, as to the outside form, have no likeness to each other, and yet for all that, do they produce one and the same Herb, if they are implanted apart in the Earth. Just thus is it with the Metallick Buds and Stocks which are wont to sprout forth, as well from the Metallick *Roots*, as from the Metallick *Seeds*, in so much, that a Tree grows up of the same Nature and Form from the Metallick *Root*, as Springs from the very *Seed* it self. Now 'tis evident, that in the Metallick Kingdom, ♄ or Lead supplies the place of the *Root*; ♂ or Iron, of the Trunck or Stock: *Jupiter* or Tin, of the Bark, ☿ or *argent vive*, of the juice betwixt the Trunck and the Bark; ♀ or Copper, of the green Leaves; *Lune* or Silver, of the white Flowers; and ☉ or Gold of the ripe Fruit and Seeds. If therefore the Metallick plant is to be multiplyed, that Multiplication cannot be more commodiously effected then by ☉ and ♄, that is, by the Seed, or by the Root of the said Tree. Whosoever therefore desires to perform ought in this kind, he will not find any convenienter matters, then ☉ or ♄, that is, Gold or Lead. But yet I do not mean those vulgar Metals, but such, in which the Gold lyes as yet immature and invisible, and which is to be made visible, fixt, mature and constant by the help of Art. So then, the self same thing which may be discerned, above, in *Sol*, and appears visible to the sight, is in like manner found beneath in *Saturn*, in an invisible manner. And thus experience it self shews, that, out of two things unlike, as to the outward shape, one and the same thing like them may be made, because their internal parts are of one and the same Nature, and this outside difference or unlikeness proceeds only from the impurity, and defect of Maturation. Out of *Saturn* therefore, as out of an unripe and impure Gold, some good may be produced: But it must of necessity be well washt, and out of it being well washed, may the first *Ens* of Gold be extracted, and be fixed. But now, if out of mature Gold, you would yet educe something, it must then again first putrefie and be reduced into nothing, afore any more noble thing can proceed there out of. For it is like to the Seed of the Vegetables, which do's not admit of any Multiplication of it self, unless they are first put in the Earth and consumed by Putrefaction: And this is proved, and asserted by the Testimony of our Lord Christ himself, who says, that except a grain of Wheat rot in the Earth, it cannot bring forth any Fruit. Certain it is therefore, and firmly true, that Gold cannot be translated into a better degree, unless it be again destroyed, and reduced into such a Body, as out of which it cannot be reduced into its former Golden Body [or Form.]

A. *What is it that you say, can it ever be possible, that a Metal so constant in the fire should be on such wise destroyed, as not to be reducible unto its former Body? Verily I have but small reason to boast of any great matters done by me: For I have for some years past tormented my self hitherto, about decocting and cooking of Gold: I have dissolved it in sundry sharp [and Corrosive] Waters, and have beheld its ascending with its yellow Colour, by a Retort and through an Alembick, but yet I never got ought else in the Precipitation of the same, but common Gold, and which was not in the least bettered thereby. And therefore I did at last conclude with my self, as many others have done, that the common Gold could not be the matter of the Philosophick Stone, and it holds hidden within its Body, no more Tincture than it stands in need of, it self; and that therefore it has not the Faculty of tinging other white Metallick Bodies.*

B. I do not at all wonder at your falling into this Opinion. There are many others besides you, that are of the same mind; Nay, I my self doubted much about this very thing, *viz.* whether or no, Gold hides within its *inward* parts any more of *Colour*, than it shews unto us in its outside shape. But then on the other hand, it could not seem at all likely, that such eminent Men should publish such great Fallacies and so many Lyes, merely to seduce Men, by. And whilst I was thus wavering in this kind of doubting, the Truth did at last (after sundry and many inquisitions) by a mere chance present it self unto me; in so much, that I am now clearly convinced of my Error, and am even constrained to believe, that a true Tincture, tinging the imperfect Metals, may be extracted out of Gold. For well may that be believed, which the Eyes see, and the hands feel.

A. *I rejoyce exceedingly to hear you say, that you have seen the Truth, and I hope that in time you will refresh me with a sight thereof too.*

B. Whatsoever lyes in my Power to serve you by, I will not in any Case deny unto you: But thus much I would you should know, that the Splendor or brightness of the Truth it self hath shone upon me, but I have never as yet brought the work it self unto an end, by reason of the want of time: But yet however, I am confident and firmly persuaded, that if no impediment chance to happen, I shall bring it to its wished end. And now seeing you are by some years younger than my self, and that you have store of time and all other Conveniencies, I dare be confident, that you would finish that Operation much sooner, should I but reveal unto you those things, which I am already arrived to the knowledge of, by the Labours of mine own hands.

A. *Proceed on, I pray, in this your Liberality, and make me, as being a Man following after Honesty, partaker of your Happiness, and I shall be everlastingly obliged to you and yours. And whatsoever Labour or Task is to be undergone for you; I will with a ready and willing mind undertake it, and in all things respectfully regard your wholsome Instructions.*

B. Well! I trust you, and believe, that you will perform your Promises, by which you bind your Credit;

but however you ſhall give me your hand, and Promiſe me, that you will conceal the Art in moſt profound ſilence.

A. *I will, here's my right hand, and Credit upon it.*

B. Hearken then, with your utmoſt diligence, and with an accurate intention, receive the things which I ſhall ſpeak unto you.

A. *I do, and I liſten attentively.*

B. In the firſt place then, you are to know, that, if you would make any good thing out of the common Gold, you muſt perfectly caſt out of your mind that Opinion, which hath hurried not a few into no ſmall difficulties, imagining, that (by the help of ſome *Menſtruum* or other) the *Colour* of the Gold is to be extracted out of it, and that Silver is to be tinged, with that ſame Golden Tincture thus extracted, and that, to the remaining white Gold, its Colour may be again reſtored by the other leſſer Metals, as ☿ or *Antimony*, Copper, or Iron: Such thoughts as theſe you muſt clearly remove out of your mind, as being thoſe which rob a many of their precious Time and Eſtates. There are ſeveral ways, by which I know how to extract the Colour from Gold, but tis needleſs to reckon them up here by a tedious repeating of them, ſeeing they are not any ways profitable, but rather cauſe loſs of Time and Goods. The main thing you are to mind is this, *viz.* to meditate [and enquire] by an accurate and unceſſant ſtudious Search, by what means you may deſtroy Gold, kill it, and ſo compel it by Putrefaction to produce to view its internal and inviſible Colour, and (on the contrary) to introvert (and hide) its external and viſible Yellowneſs. For Gold it ſelf is no other thing ſave a mere Tincture, to the acquiring of which, there needs not any other thing ſave the true Key, which unlocks Gold, introverts it, and renders the inviſible Colour, viſible. Beſides, neither are thoſe to be hearkned unto, who boaſt of reducing Gold into its three Principles, *viz.* *Salt*, *Sulphur*, and *Mercury*; and of freeing thoſe three from all their impurities, and then, of conjoyning them again, being thus Purged, and of Fixing them into an Univerſal Tincture; and ſuch like moſt impertinent trifling Proceſſes, as theſe. For they are mere idle Dreams, and can never be accompliſhed, but come to juſt nothing, and clearly delude the Covetous Thirſters after Gain, by their vain dependence thereupon. Nor are there in Gold any of thoſe Feces, which they prate of its being defiled with, neither doth it admit of being ſevered and diſſolved into thoſe three Principles. But put Caſe it were poſſible ſo to be, what profit, I pray, could we hope ſhould accrue to the ſaid Gold by ſuch a fruitleſs Labour, whereas we ſee, that it is not in the leaſt meaſure bettered by ſuch a Separation. It remains therefore for an undoubted Truth, that Gold neither contains any Feces, nor admits it of a reſolution into Three Principles, but that it rather requires to be Radically diſſolved by a due Putrefaction, and to be ſo opened or unlockt. And farther, the Labour of ſuch Men is likewiſe vain, who Endeavour by the help of Saline, Cementations to extract from Gold, its Soul: For though ſuch Cementations may ſometimes ſucceed ſo well, as that the Gold when taken out is plainly white, yet nevertheleſs ſuch a white Gold doth as yet contain in it its own peculiar Colour, the which, a little *Saltpeter* caſt in upon it in Flux, doth eaſily reſtore unto it: For then that whiteneſs vaniſheth, and the Truth appears, and ſhews you, that it neither loſt its yellow Colour, nor its weight, but retained them both, in the Cementation. Nay, we have been many times deceived our ſelves by theſe kind of Operations, and have perſuaded our ſelves, that we had diſpoiled the Gold of his Colour or Tincture by the Salts, whereas it had but only attracted a certain *Sulphur* out of the Salts, by which it was made White. You may give Credit unto me, for I ſpeak experimentally, and do not tell you dreaming Stories. I will inſtance it unto you, by an Example. Diſſolve a little Gold in ſome *Aqua Regis*, and pour the Solution upon powdered *Tartar*, that ſo being poured upon the ſaid *Tartar*-powder, it may be hid and covered over: Put this *Tartar* thus moiſtened with the Solution of the Gold, in a ſtrong Crucible, the which you muſt cover well with a Cover, and lute it: Or rather, put it in a Cementary Pot or Veſſel, which will be better. The Veſſel being placed in the Cementary Fire, the Gold will extract a peculiar *Sulphur*, and become White and Brittle, after its Separation from the *Salts*, by being melted. And now who is it, but would believe, that the Salts had extracted the Colour of the Gold from it, whereas it is no ſuch matter. For a little *Saltpeter*, or elſe the *Cineritium*, or *Cupel* can drive away all this white Colour, and reſtore it to its former Yellowneſs again; and this is, what my ſelf have ſeveral times done and experienced with mine own hands.

A. *Now again, here's a new Story I never heard of afore, who would ever have believed, but, that when they had taken their Gold (tinged with a whiter Colour than Silver) out of the Cementary Veſſel, it had been clearly diſpoiled of its Tincture? But now ſeeing it is not ſo, there muſt of neceſſity lye hidden under ſuch an Action as this, ſome other Secret and Wonder. Verily it is no trifling Matter thus to make Gold white, without the help of the white Metals; and it is the more wonderful too, becauſe it is not known, from whence that white Colour receiveth its Riſe: It could not get it from the* Aqua Regis, *nor could it have it from the* Tartar, *and this makes me ſtill wonder the more. And therefore, pray, rid me of this doubt, and unriddle the buſineſs unto me, for 'tis not without cauſe, that I ſuppoſe ſome great Secret may lye thereunder hidden.*

B. Attend diligently to what I ſay, therefore, for its impoſſible for you to apprehend all things at one very daſh [as I may ſay, and at firſt.] We will firſt of all treat about the Gold only, and of other Secrets afterwards in due time. But yet [by the by] I would have you obſerve in this place, this one thing; that as touching that *Sulphur*, which made the Gold white and brittle, there muſt needs be a notable Friendlineſs betwixt them, becauſe it was ſo eaſily extracted out of the *Tartar* by the Gold. And upon this Account there may be ground to ſuppoſe, that if the Gold were left lying longer in that cloſe Cementation, that *Sulphur* which rendered the Gold ſo white, might haply be rendred Red, and fix in the Gold. For every *Sulphur* is a Tincture, when it is made fixed, and gets an Ingreſs, from the other Metals. Do not undervalue this Secret, but fiſh out the Property of this thing, by a more accurate Meditation, for you will draw from thence much Good.

A. *Verily, I can methinks conjecture, that this very knack hath more in it than it ſhews for; I will ſearch thereinto more accurately; perhaps this very way is a nearer one, than that which requires the inverſion of the Gold. I remember that I have read amongſt the Sayings of the Philoſophers, this Expreſſion;* That their Gold does not tinge, unleſs it be firſt tinged, nor receiveth it a Red Colour, unleſs it be made firſt White. *I perceive, that Nature is more abundantly ſtored with infinite Riches, and that it cannot be ſo eaſily Searcht out*

to

to the bottom, and the longer a Man seeks, the more he finds and meets with; insomuch that at last, there is such plenty of good things offering themselves to such Seekers, that it makes them puzzeld which to choose, seeing they so commend each others Benefit and Profit. Besides, your words are very hard to be understood, and hard to be born. For it seems a thing exceeding all belief, that the most constant Fire-during-Metal, Gold, should be so changed, as to be no more Gold, and very hardly, yea, not at all reducible by the help of Art into its former Body. I do often meet with that Opinion and Decree of the Philosophers in my frequent reading of their Books, viz. *that Gold must be putrefied, if any better and nobler thing is to be generated thereout of: But whereas it seemed unto me a thing beyond the Power of Nature, and altogether impossible, for such a constant Matter to undergo any Putrefaction, I supposed that the Philosophers pointed at some other thing by that Putrefaction of theirs. Mean while, I earnestly expect from you a Demonstration of the possibility and Truth of this thing.*

B. Come then, on God's Name, a little nearer me, and heed well the things which shall be shewn unto you.

We will here take half an Ounce of common Gold, and put it into this *Aqua Fortis*, made of *Vitriol* and *Saltpeter*, whereto we will add the same weight as the Gold is of, or a little more, of our *Saltarmoniack*, without which, the *Aqua Fortis* alone, and by it self, is not able to dissolve the Gold.

A. *Pray, Sir, why do you say, Our* Salarmoniack? *Are there several and different kinds of it? For my part, when I dissolve God, I put into the* Aqua Fortis, *that* [*common*] Salarmoniack, *which is every where to be had in the Merchants Warehouses, and is very fit to dissolve Gold into a Yellow water.*

B. You speak very well after your own way; And I confess, that every *Salarmoniack* mixt with *Aqua Fortis* is very good to dissolve Gold; nor is this any new way, for 'tis in very much use amongst all the *Chymists*, who are wont on this wise to dissolve their Gold, but yet that which is thus dissolved, still remains Gold, and doth easily admit of being again precipitated out of the *Aqua Fortis*, and of being reduced by Fusion into the former Body, it had afore its Solution. But if so be, that the Solution shall be made by the help of our *Sal Armoniack*, then is the Case vastly altered, and your attempting its Reduction again will be in vain. For if Gold be but dissolved barely once with our *Saltarmoniack*, it admits not any more of melting, nor doth it of it self return again into a malleable Metallick Body, but gets a Reddish Scarlet kind of Colour in the Tryal [or Crucible] and remains an unfusil Powder. And if you add some *Borax* thereunto, and set it in the Fire then to melt, it will pass into a Red Glass, which is a sign of its being plainly destroyed, and of its being transmuted into another Body. And therefore I dare aver, that there is seated in our *Salt Armoniack* a power of inverting, and transmuting Gold, and of making it fit for the Philosophical putrefaction; which thing is impossible to be done by any other Salts whatever they be, and what Name soever called by.

A. *Certainly, this is a Divine miraculous thing, to subject Gold, so mightily constant in the Fire, unto Putrefaction, and to reduce it by Putrefaction, into a nothing: For I have read too and again, amongst the Philosophers Writings, that it is an easier thing to make Gold by Art, than to destroy Gold made by Nature. And therefore this Salt must needs be a very wonderful one, which is able to effect these and other, the like almost incredible things.*

B. Well may you term it a wonderful Salt, for so it is, the like of which, no Man will find in the whole World; though to such as know it, it is so vile and mean a thing; insomuch that scarce any one would think it likely, that such things could be done thereby, as are wont to be, should it be but named by its own proper Title. Does not, I pray, that Philosopher, *Cosmopolita* [or *Sandivow*] confess, that he hath oftentimes declared the Art, and Secret of the whole Philosophick work, word for word, sometimes to one, sometimes to another, and yet they would not at all believe him, by reason of the meanness, or vileness of the Work? And does not he make frequent mention of his own, and not the common *Sal Armoniack*? But that you may yet give more belief and credit to our Salt, I would have you read the *Turba* of the Philosophers, wherein you will find all those things which they have published concerning their Salt: And amongst others, hearken to those few words, which the Rosary mentions: *Our Salt dissolves Gold into a red Colour, and Silver into a white Colour, and transmutes them out of their Corporeity into a Spirituality, and with our Salt, are their Bodies calcined.* And for this reason, *Lumen Luminum*, also says, *That if the Omnipotent God had not created this Salt, the Elixir could not have been perfected, and the Study of Chymistry would have been in vain. Avicen* saith, *If thou hast a desire of getting Riches, prepare Salts, that they may be changed into a clear Water, for by the Fire are Salts changed into Spirits: Salts are the Roots of thy work. Hermes* saith: *All Salts are Enemies to our Work, and to our Art, save the Salt of our* Lune: *Arnoldus* saith, *Every Salt that is well and rightly prepared, is of the Nature of* Salt Armoniack, *and the whole Mystery of our Art consists in the Preparation of common Salt: He therefore that knows Salt, and its Solution, to him is the Mystery of the ancient wise Men known. And therefore bend the utmost Meditations of thy Wit upon the Nature of that Salt only, in which the Wisdom of the ancient wise Men, and every Mystery, is found hidden and concealed.* The Writings of the Philosophers are full of those and such like Sayings, and they do every where mightily insist upon Salt. And now, what think you of these Testimonies; what! do the things I have spoken, yet find any belief in your Breast?

A. *Yes Verily, and now I am on your side; but yet I do as yet desire, and heartily wish for this one thing, that you would for once let me see your Labour, whereby I may convince other incredulous Persons, and make them believe too.*

B. Well, I am content; and come let us go to work, and let us put the Gold in its requisite *Menstruum*, and place it in warm Sand, thereby to hasten forward the Solution of the same; though there is strength sufficient in our *Menstruum*, to dissolve the Gold in the Cold without Fire. We shall in a short time see it of a yellow Colour: And behold that very Colour, and the Gold it self is so changed, as it is never more reducible into its former golden Body. Thus have you now the entrance and beginning, which as yet is vastly distant from the wisht for end: And when you now see the beginning, know, that is the first day of our Philosophick Labour. Next, let us proceed to the Putrefaction of the dissolved Gold, without which, no Colours present themselves to our view. Behold in this very moment, *Sol* begins to wax black, and in a little while after it will conceive such a thorough blackness, that it will be like to Ink, and may serve to write withal on Paper. This blackness, the Philosophers call the Head of the Crow, by that

that Name pointing out unto us their Putrefaction; by which, the ſecond day of our Philoſophical Labour is finiſhed.

Our Ground [or Earth] therefore, being ſufficiently enough moiſtned, we muſt beſeech God to beſtow upon us the hot ſhine of the Sun; for without the Suns heat which ſtirs up the Life in all things, there cannot poſſibly be any increaſe and growth. Lend me therefore your beſt attention. Aſſoon as the putrefied Body of our *Sol* ſhall feel the warming heat of the Sun, its blackneſs, which was the true Sign of its Putrefaction, will vaniſh away by little and little, and give place to the acceſs and approach of many moſt delicate Colours, the which, the Philoſophers have named the Peacocks Tail, and this finiſheth the third day of our Philoſophical Labour. And now, when the Fruit-producing Sun ſhall have thus illuſtrated our Field, or Ground with its warmer Rays, but for one day as yet, we may eaſily ſee, what is farther likely to come to paſs hereafter.

A. *Huy da! what a wonderful thing is this, that I ſee here? in how ſhort a time, and how ſpeedily hath the Peacocks Tail changed it ſelf into a thick Blood? Who could ever believe it, unleſs he had ſeen and beheld it with his own Eyes?*

B. I confeſs it is ſuch a thing as may well cauſe in any one moſt exceeding admiration, ſeeing that there proceed from Art and Nature, Operations of ſuch great moments: God hath made all things very well, and ſhould he not permit ſuch an admirable changing of Colour, to appear in the Operation, verily the Philoſopher would be in doubt, whether or no he might hope for an happy Succeſs of all his Labour: And now upon the occaſion of this Blood-like Colour, is ariſen the Name of Dragons Blood amongſt the Philoſophers, who ſay, that when this Colour appears in view, the fourth day of the Philoſophical work or Labour is finiſhed.

A. *Good God! how great, and how wonderful are thy wonderous Works, who can find them out by his own Search and Induſtry? There do daily happen greater and greater encreaſings of our Faith, ſeeing that I behold with mine own Eyes, ſuch things as heretofore exceeded all my belief. And I entreat you to tell me this one thing, whether or no, there lies in this Blood, as 'tis now prepared, a moſt excellent Power of healing Diſeaſes or no, and if it may ſafely be made uſe of, for the healing of Sickneſſes without any farther Preparation?*

B. Yes verily, there does lye therein hidden, an incredible healing Faculty, and this, its very Signature doth openly witneſs. For God doth not ſign or mark all the Herbs, all Animals, all Stones in vain, by the external Signature of all which, it is an eaſie matter to know, what uſe they are of for Mankind. Foraſmuch therefore, as our Gold is turned into a thick Blood, it is a moſt certain Teſtimony, that it is Serviceable for the curing and amending of Man's Blood. For, if the moſt ancient Phyſicians have made uſe of Gold, reduced either by filing into a moſt ſubtile Powder, or by beating into moſt thin Leaves, in the Cure of the moſt deſperate Diſeaſes, yea, and of the Leproſie it ſelf too, and this not without Fruit, and Succeſs; how much greater commerce then will this Gold of ours thus changed into a Red Blood, have with the Blood of Mankind. Would it not [think you] abound with a greater Power of freeing it from all falſe and ſuperfluous Aqueity, and other evil Humours and Impurities, and of reducing it into its former State of Good health? For the occult Virtues of the Gold are no more ſhut up now, like as when the Corporal filed, or leafe Gold held them lock'd up, that they are unlooſed, and releaſed from their Fetters, and ſo perform their work by moſt free and unclogg'd Operations. And ſeeing that Gold is, by Ancient and Modern Phyſicians, attributed to the Heart, and to the whole Blood of Man's Body, and ſeeing that experience it ſelf hath demonſtrated, that it takes away the preter-natural affects of the Heart, and heals the corrupted Blood; why ſhould not this our Blood of Gold effect the ſame with greater Efficacy, and a more happy Succeſs. With this very Blood, have I already performed wonderful things in the moſt grievous Diſeaſes in the Bodies of Men, after they have been firſt purged with ſome *Panacea*. I have therewithal healed the Leaprous in a ſhort ſpace of time, and ſuch as have to no purpoſe made uſe of the aſſiſtence of the moſt eminent Phyſicians for ten or twelve years continually, to their great Coſts and Charges, and this I can evidence by moſt clear Teſtimonies, which I keep by me. Nay farther, even at this very day in very many places, into which I have ſent of this Blood, the deteſtable Leproſie, the *French Pox*, and other moſt grievous Diſeaſes of the Heart and Blood (to the Cure whereof, Gold is in an eſpecial manner ordained by God) are taken away by an admirable way of healing: For ſeeing, that (as we ſaid afore) it ſtrengthens the Heart, and mundifies the defilement of corrupt and polluted Blood, and purgeth them away, it muſt of neceſſity likewiſe expel, as well the open or viſible, as the occult and hidden Diſeaſes of the Body of Man. For if Nature be but corroborated, it doth eaſily ſubdue and expel Diſeaſes, by the help of other very ſmall Medicaments; the which thing I have by my manifold experiences found to be moſt true, when I have adjoyned this Aureous Blood to other ſutable Medicaments. For it cannot be expreſt, what, and how much I have done, both in young and old, with this very Blood ſo exhibited, in the *Stone*, *Gout*, *Dropſie*, *Leproſie*, *Epilepſie*, and other Chronical Diſeaſes, which have taken deep Rooting in the Body. Therefore if God ſhall pleaſe to lengthen out my days, I will very ſuddenly publiſh the uſe thereof, that ſo it may be brought into common Uſe in all Diſeaſes. For this Golden Blood may [probably] be the potable Gold of the Ancients, which never more ſuffers it ſelf to be reduced into its former malleable Body. I have ſundry ways attempted to reduce it, but never could effect the ſame. But yet this one Caſe I except, *viz.* a little of this dry Blood, being put upon molten Gold, hath ingreſs into the ſame, and the reſidue ſwims at the top thereof like an Earth: but yet that little which adjoyned it ſelf to the Gold, is of ſo great a Power as to make all that whole Body of Gold which it entred into, brittle, yea ſo brittle, as that it ſuffers it ſelf to be beaten in a Morter into moſt fine Powder.

A. *I Marry, Sir! theſe are Miracles indeed, which I ſee and hear; who will make any farther doubt, but that the Univerſal Tincture which heals the Sickneſſes, or Diſtempers both of Men and Metals, may be prepared, out of this Golden Blood? For all the Philoſophers do with one Conſent confeſs, that their Tincture, when quite perfected and caſt in upon molten Gold, doth render the ſame brittle. And now ſeeing this Golden Blood of ours, being as yet immature, and not prepared, doth effect the ſame, would it not, I pray, perform the ſame much better, if it had but Ingreſs given unto it, by inceration, whereby it might flow the eaſier, and enter the more readily. I do not now at all doubt, but that this aureous Blood both can and in time will become an univerſal Tincture full of Medicinal Virtues.*

B. Al-

B. Although I am not minded publickly to diſcloſe an *Arcanum* of ſuch great moment, and ſo great a Myſtery, and to throw ſuch a precious Pearl afore Swine; yet I am of the mind to prepare ſome quantity thereof, and to part with ſo much unto the Sick that need it, and that ſhall deſire the ſame from me, as is requiſite for their Uſe. And not only to the Sick, but to others too, that are willing to apply it to other Uſes and Experiments; but eſpecially unto thoſe who would fain try, whether or no even this very Blood will turn it ſelf (according to my Deſcription) into a white Milk, and then into a Red Stone, and, by a new Reiteration of the work, paſs through all Colours. This deſireouſneſs, or inquiry after the Truth cannot at all prove any ways diſadvantageous to me, or mine. For the Art it ſelf will always remain an *Art*, unleſs it chance to happen, that ſome one or other Searcher, which is of a more ſubtile Ingenuity, ſhould, by his diligent and ſerious inquiry, ſearch out the very Foundation of the Art it ſelf. Which if it ſhould ſo come to paſs, he muſt then think, that God hath vouchſafed this Gift unto him, and that he now conſiders, and well knows, what eſteem he ought to ſet upon it, and by what means he ought to hide it. However, this is moſt certain, and indubitably true, that this Doctrine, and inſtruction of mine own preſcribed in my Writings, will be a ſpurring encouragement to abundance of Men (that have hitherto exceedingly doubted of the Truth of this ſo great a Myſtery, and ſhall now come to know it, laid open by me with ſuch evident Demonſtrations,) and cauſe them to ſearch with a greater and more ſerious ſtudy, and to caſt off all other unprofitable Coctions whatſoever. For to what purpoſe is it to uſe many things, about that which may be done by fewer and more eaſie. All things have their time, and ſo has this *Arcanum* too its own proper time. But we ſhall ſpeak more of theſe things in the following Deſcription of the ſecond univerſal Medicine. All theſe things which thou haſt hitherto ſeen, are indeed very good; but we are as yet far off from the end. Have you not likewiſe read in the Philoſophers Writings, that the white Swan doth alſo ſhew it ſelf in the Work? Now, if by but as yet *One* days ſhining, the Sun ſhall have illumnated by its brightneſs the Dragons Blood, you ſhall ſee it turned into a white Milk, which Milk the Philoſophers have written off, and which at length goes into a *Coagulum*, or Cheeſlike Curdling. Look therefore now upon that Milk, which you ſee to admit of Coagution and Condenſation, by little and little: And thus with this golden Cheeſe do we finiſh the Philoſophical Labour of the *Fifth* day.

A. *God be thanked, that this days Labour hath alſo ſucceeded, as we could wiſh. But foraſmuch as thoſe things which you mentioned, but now come in my mind,* viz. *that we are far off from the end of the work as yet, and yet too morrow is the Sixth and laſt day of this our Philoſophical week; and farther, ſeeing you ſaid preſently after the beginning of this our Conference, that the whole Work would be finiſhed in ſix Days ſpace, and that on the ſeventh Day we may ceaſe from all our Work and Labours, and ſanctifie it, or keep it holy, and give God due thanks for all theſe his Benefits beſtowed on us: Seeing* (I ſay) *that all theſe things come now in my mind, 'tis no wonder, if they likewiſe create in me a great deal of Care and Puzzling, to think, how this can be, that all thoſe things that remain yet behind may be perfected, and brought to a full end in one day.*

B. Ceaſe your Care [my Friend!] nor do you ought elſe this Sixth Day, but hourly encreaſe the Fire by Decrees, and ſtir it up more and more, that ſo you may ſee, by what means our white *Coagulated* Milk will by little and little paſs into a yellow Colour, and will at length be thoroughly Red, and abide moſt conſtant in the Fire. This fixed Redneſs, the Philoſophers call their *Salamander*: The Poets tells us a Tale, of a certain Worm that lives in the Fire, which cannot be burnt or conſumed thereby. Therefore, after the Philoſophers have brought their work through all the Colours, and have at length attained ſo far, as that there appears no other, but a mere fixed Redneſs, they named it their *Salamander*, with which (if you except only Inceration and Multiplication) they ended their work, and ſo do we alſo finiſh theſe our preſent Labours.

A. *Praiſe and Glory be to God, by whoſe Divine help, we have (by ſo happy and deſired a Succeſs) promoted our work to its moſt deſired end.*

B. Amen. And thus will we now put an end to our work, that ſo we may ſanctifie to morrow, which is the ſeventh Day, to the Honour and Glory of the Divine Bounty.

A. *Ah, my deareſt Friend; let me intreat you not to involve me by your immature departure, in greater troubles and difficulties. There are divers ſcruples and doubts, and thoſe weighty ones too, that perplex my mind, which unleſs you remove afore, your going away (but I hope you'l ſtay) I ſhall of a certain Truth be tormented all this enſuing Night with the moſt bitter Pill of Diſquiet and Anxiety, and then you may well gueſs with what mind I am likely to celebrate the to morrow Sabbath. For I am yet as plainly ignorant, what uſe to put that* Salamander *to. As concerning thoſe things, which you have faithfully diſcloſed unto me hitherto, I truſt, I ſhall not err in their Operation, but as touching Inceration and Multiplication, in which, as in two Cardinal main Points, the very [Pillar or] hinge of the whole Operation lyes, as you ſaid, I muſt needs confeſs my ſelf more Blind, as to them, than* Tireſias *was: I muſt needs ſay, that I behold the promiſed Land ſituate afore mine Eyes, but the way that leadeth thereunto is hedged in with ſuch Thickets, and ſo many Brambles, that I do not ſee which way I ſhall extricate my ſelf out of them. Unleſs the mercy of God, and your help come in to my aſſiſtance, I ſee that all my Labours will be in vain.*

B. 'Tis no ſmall trouble you bring me, by your importunity, don't you ſee the approaching Evening. You Act juſt according to the Cuſtom of importunate Men, who having once gotten ones out-held Finger, do ſnatch in the whole hand. At firſt, you only entreated me to diſcover unto you the Matter and Key of the Art, and ſaid, that you would eaſily find out the reſt your ſelf. Why then do you not ſeek thereafter, and let me go?

A. *Good Sir, be not diſpleaſed with this my importunity, proceeding from the too earneſt deſire, I have, of knowing ſo great a Secret: And Chriſt himſelf ſaith, if ye ſhall knock, the Gate ſhall be opened unto you.*

B. Well, ſince I ſee, that I muſt expect no quiet from you, till you do likewiſe learn ſomething from me, concerning Inceration and Multiplication, I will in a few words ſet afore your Eyes, things of great moment. Look to it, that you liſten very Attentively.

A. *I do.*

B. Have you not read in the Philoſophers, when they ſpeak of Inceration, that the out-driven Soul is to be reſtored to the dead King, that the dead Body may be recalled back to Life, and that it, ariſing with a more glorious Body, and a more excellent Crown, may prove an helper to its meaner Brethren. The

Philoſophers words are, as follows. Here the Soul lets it ſelf down, and refreſheth the dead Body. For it is not ſufficient, that the King be deprived of Life and ſo left dead: No, no, for neceſſity requires, that its Soul be reſtored unto it, which may reſtore its Motion, and loſt Life, to the dead Body. Now, by how much the oftner, the Soul and Life is taken away from the King, and that which is taken away be again reſtored thereunto, which ſo much the ſtronger and more active Body, and ſo much the Magnificenter a Crown will he ariſe withal. By theſe few words have I laid open unto you, Inceration and Multiplication. But yet there are other ways of increaſing our fixt *Salamander*, and rendring it fuſible, *viz.* by the addition of Mercurial things, which, by their ſpeedy Flux and penetrating Property, do pierce into this our deſtroyed Gold, diſſolve it, and ſo bring to paſs, that there is made of them both (*viz.* of the deſtroyed Gold, and which admits not of any reduction, and of the Volatile *Mercury*) a certain fuſile midling Body, which ſaid Body, thus conjoyned of the two, is to be maturated by the bare Regiment of the Fire. And by this Maturation, is this univerſal Medicament rendred ſo fuſible, as to have Ingreſs into all the Metals, and to penetrate them.

A. [*But pray Sir,*] *Is not this way of giving a more eaſie Ingreſs and Flux to our deſtroyed, and irreducible, Gold, by the* Mecury *of Metals, more facile, and a nearer one than that aboveſaid way, which requires a great many Operations, by the reiterating of Inceration and Multiplication?*

B. Yes Verily, it is a ſhorter and eaſier way, as being void of many tedious Labours, for it needs nothing elſe, but that the *Mercury* of ſome Metals be put into ſome good ſtrong Glaſs with the inverted Gold, and be ſo brought unto Fixation. But yet this Medicament, that is on this wiſe wrought up with the ☿ to a conſtancy in the Fire, cannot extend its Colour ſo largely, as that, which is rendred fuſible by ſo many reiterated Operations, becauſe, in every reiteration, the Tincture is exalted and multiplied. And now, have you any other demands? if ſo, be brief, for the Evening approrcheth.

A. *Yes, Sir, there are many things, that I would ask about, but ſeeing that my importunity is troubleſome, I I will at preſent reſt content with thoſe things, I have heard. Only, this one thing more would I gladly know,* viz. *where I ought to ſeek for the Soul of the King.*

B. You muſt look, whither you have driven it, and there muſt you ſeek it, and, having found it, you muſt reſtore it to the dead King, and ſo you will again begin your Work, and you ſhall again bring it through all the Variety of Colours, like as you did at the firſt time. For when the Soul is reſtored to the Body, there is made a new Solution, which is to be again putrefied, that it may turn back; and then proceeding farther on according to the ſame way, as was done in the firſt Operation, there will appear all the Colours, and they too far more delicate than in the foregoing Labour. The *Crows head* will be Blacker, the *Dragons Blood* Redder: The *Lac virginis* Whiter, and the *Salamander* more fuſile, than it was in the firſt Operation. For by how much the oftner you ſhall repeat this Mortification and Vivification of the King, ſo much the more Magnificent, more precious, and more efficacious a Tincture, will you obtain. Believe it, and give God the thanks, and be mindful of the Poor, aſſoon as ever you are Maſter of your Deſires. Come to me again upon *Munday*, that I may alſo teach you (according to my Promiſe) the way of making another Philoſophical work out of the Poiſonous, Volatile, and black *Saturnine Magneſia*: And ſo farewel.

A. *In going away ſpake thus with himſelf, Praiſe and Glory be unto God, who hath thus, by the help of one Man, beſtowed on me ſo great a Grace. I now go home with a cheerful mind, and there will I moſt deſirouſly wait for* Mundays *approach, that ſo I may likewiſe get, from my Friend ſent me by God, that other work,* [*made*] *out of the Volatile and Philoſophical Gold. But this Operation, done with fixed Gold, doth pleaſe me wondrouſly well, eſpecially for this reaſon, becauſe, in every Reiteration, there do always appear the ſame Colours, which preſented themſelves to view in the firſt Operation. Who would ever have believed that ſo many, and ſuch excellent Colours lay hid in common Gold? And now, if this can be demonſtrated in the common Gold, what may be expected from the ſecret Gold of the Philoſophers, in which (they ſay) many more Colours lye hid than do in common Gold. 'Tis a common Proverb,* [*I confeſs*] *that he who ſeeks from another comes to know many things, but* [*uſually*] *renders himſelf ungrateful: But yet however, I cannot chuſe but propoſe unto the Man one Queſtion more, perhaps ſome ſweet refreſhing Solar Ray will ſhine upon me. My Friend! I am come again unto you.*

B. Well, tell me, what more you have to ſay unto me?

A. *As touching thoſe things which I have ſeen, I deſire no farther Information concerning them. But, it will moſt thoroughly ſerve my turn, if you will be but pleaſed to anſwer but unto one Queſtion, which I ſhall propoſe unto you: And that is this, Foraſmuch as almoſt all the Philoſophers, in the deſcription of their Stone, do tell us, That the King is to be conjoyned, and Radically mixed, with the Queen in a peculiar Mercurial Bath, that ſo from them an Off-ſpring more noble than the Father may ariſe: And ſeeing likewiſe, that the ſame Philoſophers do at large celebrate the Coition of* Mars *and* Venus: *My deſire is very great, to underſtand your Opinion concerning this buſineſs. For if there could happen, or proceed, any good effect from this Conjunction of Gold with Silver, or* Mars *with* Venus, *what need would there be of ſo many repeated Coctions of the Gold?*

B. This way, which you make mention of, is not unprofitable; and, to tell you the Truth, there are yet nearer ways, the which whoſoever enters into, will equally become a Maſter of great *Arcana*'s. I was willing to ſhew unto you the work upon bare Gold only, for this reaſon, *viz.* that you may ſee with your Eyes, and as it were feel with your hands, that thoſe moſt eminent Colours do lye hid even in bare Gold too; which is a thing, that ſcarce one of a thouſand would have believed. And now being certainly aſſured, about the lying hid of ſo great a Tincture in Gold, you may with the greater confidence ſet about your Operations.

A. *Still more and more doth a brighter light ſhine upon me, Nor can I enough admire, when I look upon the Roſey Colour of the Lyon, that out of ſo ſmall a Lyon, there ſhould proceed ſo great a quantity of Blood, coloured with ſo excellent and delicate a Colour, when as notwithſtanding, out of other much greater Animals, there is ſcarce extractible ſo much Blood, as to anſwer to the hundreth part of this Blood.*

B. What? do not you underſtand, by what means, ſuch an incredible quantity of Blood can flow forth out of ſo ſmall a Lyon? What, do you not know, that the whole Body of the Lyon, which is the King of all Beaſts, is nothihng elſe but the mere concentrated Blood of the heart, one half Ounce of which, being boiled in many hundred Ounces of water, doth turn all

that

that water into Blood, as you your ſelf have now ſeen with your own Eyes.

A. *I confeſs, that there have now been ſhewn to the view of mine own Eyes, ſuch and ſo great things, the like of which I never heard ſo much as one word of, from any others. No Body would believe me, and (which is worſe) mine Enemies, who are moſt vile Compilers of infamous Libels, would ſet upon me with ſtore of reproaches and lyes, and call me Sophiſter and Cheater, and would ſay, that I boyl ſome* Brafile *wood, or other Red colouring Stuff in water, and ſo ſell it for the Roſey Blood of the Lyon. And therefore, I have no reaſon to make ſhew of any knowledge of this ſo great a Secret.*

B. How? what will you be afraid to be a reporter of the Truth; and to manifeſt theſe great wonders of God and Nature. That very way by which I ſhewed unto you, that that moſt high Colour ariſeth out of Gold, by the ſelf ſame way may you be able to ſhut the defiled mouths of your Enemies. And if they will not believe, that there lyes hidden ſuch a Colour in Gold, they will be convinced by the ſaid Lyons Blood, which, being made bright hot in a ſtrong Fire, and afterwards boiled again in other water, will convert the ſame, as it did the former, into Blood, and this you may even do, as often as you pleaſe. By this it is manifeſtly evident, that the Blood of our Lyon is incombuſtible. And in our being buſied about thoſe Labours of ours, there preſent themſelves to our view, three moſt delicate Flowers: The firſt is, a *Violet*, dyed with a mixt red and Sky Colour: Then, the White *Lilly*; and at laſt, the immortal *Amaranthus* ſhining with a Scarlet dye. But why, immortal? For this reaſon, becauſe neither the ſtrongeſt Fire, nor the ſtrongeſt Corroſive waters can at all hurt it, or change its Colours. The *Amaranthus* is tinged with the higheſt and moſt conſtant Colour, beyond all other Herbs and Flowers, the which does not ſo ſoon vaniſh after the manner of other Colours, which other Flowers have, but abides conſtant for many years, inſomuch, that ſuch an Herb is kept both Winter and Summer, to make Garland and Poſies, or ſuch like, withal.

A. *If now any one could be ſo happy at laſt, as to enjoy that* Amaranthus, *he might preſent many pious Virgins, with Poſies and Garlands made thereof.*

B. If you are deſirous of uſing the Lyons Blood in your Operations, then follow *Paracelſus* his Doctrine, in his *Tincture of the Philoſophers*, where he teacheth, that the Roſey Blood is to be conjoyned and fixt with the white Glew of the Eagle; which way ſeems the neareſt for the obtaining of the univerſal Tincture.

A. *I am delighted with hearing of this: The Roſey Blood of the Lyon I have, but yet I want the white Glew of the Eagle; which if I could but get into my power, I would conjoyn them both together without any more delay, and bring them to Fixation. But I cannot ſufficiently enough admire at this,* viz. *that* Paracelſus *hath made no mention, of conjoyning the Virgins Milk of* Diana *with the Kings Blood.*

B. Paracelſus has not therefore injured any, in his not manifeſting all things ſo clearly and openly, ſeeing it is the Cuſtom with other Philoſophers to do the like: If you are deſirous to uſe Gold and Silver conjoyned together, in your working, then deal with the Silver, juſt as I taught you to do with the Gold, and make thereof an incombuſtible *Lac Virginis*, and ſuch as admits not of any Reduction; the which is to be conjoyned with the incombuſtible Blood of the Lyon, and to be put into a Veſſel, that ſo theſe two Bodies, being conjoyned, may be moſt conſtantly [or firmly] united, and may never be ſeparated from each other by any kind of disjoyning. But, that you may yet better underſtand the whole buſineſs, I will ſubjoyn a few words more. Our white Eagle being put in common Water, makes the ſame, wherein it is diſſolved, ſo tenacious and glutinous, as that, it can glew Paper or other things together; and, therefore it is not without cauſe, that this our ſecret Salt is termed by Philoſophers, the Glew of the Eagle. For thoſe things, which this Glew joyns together, can never more be ſeparated from each other, and this is one mutual Bond, by which the Husband and the Wife are ſo linked together, that they cannot ſeparate from one another. It doth not much differ from the tye of Marriage, by which, the Husband and the Wife, or the young Man and Maid, are by Gods Command ſo knit and bound to each other by the ordinary Miniſter of God, that nothing but Death can ſeparate them. If now a Man and Woman joyn themſelves together without the legitimate and publick Bond of Matrimony, they beget illegitimate Children, and can (when they pleaſe) break that Conjunction of theirs, and depart the one from the other, becauſe they are not coupled with that Marriage, that proceeds from the Command and Will of God; which ſaid coupling or Matrimony is in repute, and is generally obſerved for a common Cuſtom, and as being the Will and Command of God, not only amongſt us *Chriſtians*, but likewiſe amongſt *Jews*, *Turks*, and *Heathens*, throughout the whole World. And for this reaſon, the Philoſophers were pleaſed to introduce the like coupling or Marriage in their work, and that not only of *Sol* with *Lune*, but likewiſe of *Mars* with *Venus*: Which Copulation, if wanting in theſe two laſt [*viz.* ♂ and ♀:] their conjoyning cannot have any good and happy Succeſs, as daily experience witneſſeth. But now if *Mars* and *Venus* be coupled by a Prieſt in the lawful Bond of Matrimony, they likewiſe bring forth legitimate Children, and ſuch as may be promoted unto Kingly Dignities. I could yet kindle more light unto you here, concerning this our Philoſophical Copulation, *viz.* by what means the moſt inconſtant, and moſt highly Volatile, things may (by the Operation of the ſame) be ſo conjoyned, as that they can never afterwards be looſened from their inſeparable knitting together. But at the preſent you are not capable of bearing any more. Whatſoever hath been now omitted, by reaſon of the ſhortneſs of time, ſhall be made up at our next meeting and Conference. But, one thing more comes in mind, which I would have you to know; and 'tis this. When you would make any good thing of *Mars* and *Venus*, you muſt in an eſpecial manner beware of their groſs Bodies, which are Leprous and unfit for our work. 'Tis their Blood you muſt ſeek after, the Blood, I ſay, of their inmoſt Heart, and the true Soul that lyes hidden in that Blood, which is ſo very near a kin to the Royal Blood. And now, that you may enjoy ſuch a moſt noble Blood, you muſt not imitate the Country fellows, who, thruſting a knife into the Hogs necks, do ſave that Blood that flows out from thence, to make Puddings withal, and take both good and bad Blood together. No! You muſt therefore in the firſt place, know for a certain Truth, that you muſt ſeparate out of that groſſer Blood of ♂ and ♀, that moſt ſubtil Arterial Blood of the Heart, without which Separation, you may not expect any good ſucceeding Event. Which ſaid Separation, ſeeing, I know, that you are ignorant of, I have thought good to ſet it afore your Eyes, which more clear and more perſpicuous Expreſſions. [Know then] that that moſt pure Blood is never gotten by any other means

means, but by the Corruption and Deſtruction of the Venereal and Martial Body: By which helps, theſe, ſo groſs and hard Bodies are in ſuch wiſe opened, that the inmoſt and moſt ſubtil Blood may be drawn out of them. But yet, ther's no need of deſtroying their Bodies by *Aqua Fortis*, ſeeing that Nature her ſelf exhibits unto us their Bodies already opened, in *Vitriol*, and hath left no more for us to do, but the Labour of extracting the moſt pure part thereout of. For even in the common *Vitriol*, *Mars* and *Venus* are found conjoyned by Nature. And now, when we would draw thereout of the moſt pure Blood, ſuch a *Vitriol* is to be choſen, which never hath been as yet in the Fire; this, *Vitriol* is to be diſſolved in water, and to be filtered and ſeparated from all its Feces. This green *Vitriol* contains hidden in its ſelf, the Blood of that green Lyon, out of which, the ſaid Blood is to be extracted by the help of a certain Magnet, that ſo the unprofitable and groſs Body may remain behind. For 'tis the Spirit that vivifies, the Body is unprofitable. But now, in your extracting this Blood thus pure, you muſt not be too greedy, but have a Care, that you extract no more than a little of the beſt Blood: Which if you do not heedfully mind, you will alſo extract together with the pure Blood, the more groſs and more impure, and ſo your work will be ſpoil'd. For you need only the beſt and moſt ſubtil white Blood of *Mars* and *Venus*. For, like as the ſubtileſt and nobleſt Blood of all the Animals is not Red, but White, [*viz.* the Sperm:] Even ſo, the Blood of *Mars* and *Venus*, which comprehends the Virtues of the whole Body, and the true propagating Seed, is tincted with a white Colour, in the ſearch of which, 'tis expedient we beſtow our Labour. Therefore, after that we have extracted, by the help of our Magnet, ſome two or three half Ounces of white Blood, out of twenty Pounds of *Vitriol* diſſolved in water, we then take it our, leſt it ſhould alſo extract the moſt groſs Blood too, when it can find no more of the white Blood unextracted. You had therefore need be cautelous in the extraction of that Tincture, and be circumſpect in the Accompliſhment of the ſame. For we are taught by Nature and Experience, that, in the Coition of Male and Female there doth naturally concur a white Blood to the Propagation of their Off-ſpring, and in defect of that, Nature is conſtrained to ſend forth a vile and red Blood. Therefore, we muſt here endeavour, with our utmoſt Care and Induſtry, to purchaſe by our extraction the moſt pure Whiteneſs, and not the moſt groſs Redneſs. For in that white Virgins Milk lye hidden all Colours, and the higheſt Redneſs. This white Virgins ~~Milk~~, you may promote to a Fixity and Conſtancy, in a pure clean Glaſs, without the Addition of any other thing, the which, after its being dryed, will become black, and will be tranſlated out of the black Colour into ſeveral others, and at length ſhines with the higheſt Redneſs, which puts an end to the Operation.

But as concerning our Magnet, ſeeing you know it already, you will not need any farther inſtruction about it. You have thus heard my Opinion about *Mars* and *Venus*, and have underſtood, by what means ſome good thing may be thence had. Neither muſt you perſuade your ſelf, that there is any other way of having any benefit out of them; how great is the number of thoſe, who by their vain Labours have mightily endamaged themſelves, following the Writings of *Biſilius*, in which he teacheth to make a Red Oyl out of *Vitriol*, which he calls Gold Philoſophical The bare literal Strife is not always, and every where in his Writings to be taken. There is no doubt, but that no ſmall benefits are to be had out of *Vitriol*. For the Philoſophers themſelves do hint forth unto us, the benefit therein hidden, in theſe words: *Viſitabis, Interiora, Terræ, Rectificando, Invenies, Occultum, Lapidem, Veram, Medicinam*; *You ſhall Viſit the inward parts of the Earth, and by Rectification you ſhall find an hidden Stone, a true Medicine.* And now at laſt, to cloſe up this our Conference with ſome profitable Admonition, know, that I would have thee forbear from the troubleſome Coction of the imperfect Metals, by reaſon of the too many impurities, which create many Moleſtations in the Separation of them, and cauſe much loſs of time. 'Tis better, that you take in hand *Sol* and ☽ to perfect the Work withal, which Metals do moſt abundantly contain in them, the Red and White Tincture, and are already freed by Nature from moſt of their impurities. And although, I have not as yet made the univerſal Tincture out of ☉ and ☽, yet there hath appeared unto me ſo much, from ſo many, and ſuch various Operations, that I do not in the leaſt doubt, but that the immortal *Amaranthus* may be made out of them; whereunto you may boldly give Credence, without doubting at all.

The COROLLARY, *Or, Preſent over and above.*

IN this Dialogue, the Dragons Blood is ſo deſcribed, as if it needed full ſix whole days Operations, to be perfected and brought to its full end, nor did I then know any nearer way. But afterwards, there became known unto me a nearer and more compendious Proceſs, whereby I can now (Praiſe and Glory be to God for the ſame) in a few hours time introvert and tranſmute the diſſolved Gold, and reduce it into a Red Blood, and that by the help of one only certain White *Urinous* ſublimate, concerning which, I have treated more at large in the fifth Part of my *Pharmacopea Spagyrica*. And upon the ſame Account have I likewiſe written, that the ſaid of Blood of Gold muſt [needs] at length get an eaſie Fluxibility and Ingreſs by the frequent Iteration, or Abſtraction of the moiſt Spirits from the dry Gold. But foraſmuch as the Multiplicity of ſuch Abſtractions is not only full of laborious Operations, but alſo chargeable and requires much time; and that the ſtudious Searcher after ſo great a Secret, may not by being affected with the Tedioufneſs of ſo many toylſome Operations, be quite weary, and at laſt throw off all hopes: I do therefore commend unto every one, that other and nearer way of getting it a Fuſibility and Ingreſs, *viz.* the inceratting it by *Mercury*, by the benefit whereof, he will far ſooner and eaſier arrive unto his purpoſe and final Scope. And although I have hitherto been hindred through want of time, beſides (many other impediments) from having compleatly finiſhed the Operation of the ſaid Tincture. Yet notwithſtanding, I do with an aſſured and undoubted confidence affirm unto every one, that there is given a moſt certain occaſion [or Capability] of the making and finiſhing it, and that by the hitherto deſcribed way. I bequeath to ſuch of our Poſterity, as are of a Good, Sincere, and faithful mind, thoſe things which I have wrought with mine own hands,

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and

and withal to what iſſue I have brought all my Operations. It is free for every one (as time and occaſion ſerves) to make Tryal about attaining unto the wiſht for end. For my part, I do heartily thank God, that he hath vouchſafed unto me the Ability of plentifully and abundantly preparing the Lyons Blood, and of performing no ſmall matters therewith in a Phyſical way: And therefore I ſhall be well content, though I never arrive unto the deſired end of finiſhing the Operation of the univerſal Tincture.

The Second Dialogue, or Conference, Or a Continuation of the precedent Colloquy or Dialogue, treating of the Preparation of an univerſal Medicament out of the black venemous and Volatile, Saturnine Magneſia.

A. *BLeſſed be the name of the Lord, who hath cauſed another Day to ſhine upon me. I will preſently haſte to my faithful Maſter, and will beg from him the Doctrine of the ſecond univerſal Medicament, that he promiſed unto me.*

All hayl t'yee, my deareſt of Friends! God Grant that this Day may prove happy and lucky to me and you: I am come hither to hear from you, if it ſtand with your Conveniency, to make good your Courteous Promiſes at this preſent, and to teach me the making and Preparation of your ſecond univerſal Medicament: For I have an exceeding ardent deſire, to know the manner of Preparing it, out of that Volatile and poyſonous Mineral.

B. I thank you for your good Wiſhes, and wiſh unto you the ſame you wiſht me. Look here, here's a piece of our venemous *Saturnine Magneſia*, which is the true Matter, that the Philoſophers Stone is prepared out of.

A. *I pray, is this black ſtone the true Matter, out of which is wont to be made the univerſal Tincture, and Stone of the wiſe Men? Verily I much wonder, that this ſhould be the Gold of the Philoſophers, I am extraordinarily deſirous of ſeeing, by what means ſo excellent a Medicament, and ſo noble a Tincture can ariſe out of ſo baſe and venemous a Body. I ſhould rather adhere to that old and common Proverb, and ſay, Who can waſh the* Blackmoore *white, which Nature hath generated Black? This now ſeems unto me more eſtranged from the Truth, than that which you propounded laſt week of the common Gold. For how could it ſeem at all likely to any ones bare reaſon, that ſuch a Body could be brought into a nothing, and again reduced unto a certain Body: But time will inſtruct, whether this be poſſible or not. I will therefore very patiently wait for the Event of thoſe things, which you ſhall ſhew unto me.*

B. What? Still more incredulity, and do you anew produce [and Practiſe] the Faith of unbelieving *Thomas* [*viz.* to ſee and feel afore you believe?] What do you think, I would go about to perſuade you, that you have a wooden Noſe ſticking on to your Face? Alas, Sir! my time is a little more precious than ſo, to ſpend it in an unprofitable Tattling. And that time which I now beſtow upon this our Conference, is ſpent to this end, to free you from your unbelief, and to bring you unto a true and evident Credency; to the performance of which, I am ſtirred up by the Authority of the Sacred Writ, which Commands, that we reclaim ſuch as err, into the right way, and that we ſhall receive from God this reward for our Labour, *viz.* our Star ſhall ſhine in Heaven brighter than others. Beſides, Chriſtian love requires the ſame at our hands, that we do good to others. And foraſmuch as I have well known your Chriſtian like Converſation, and Godly way of living theſe many years paſt, why ſhould I deny you the things you demand, or wind you into the Intricacies of a greater Labyrinth, ſeeing you have but too long ſtuck in them already? The things which you cannot at firſt underſtand or believe, the end will at laſt conſtrain you thereunto. Your part is to liſten very attentively to all the words, I am about to ſpeak. For I can eaſily take away from you all incredulity, and remove out of your mind every Scruple of doubting. How ſourely you look upon this black Mineral, well, but you ſhall preſently find, that all the moſt delicate Colours of the whole World are moſt abundantly found therein; and by the help of an Art deſcribed by the Philoſophers, they will appear one after the other in Operation, even from the Black head of the *Crow*, to the Red *Salamander*.

A. *Bleſs me, what an ardent deſire have I to ſee theſe things?*

B. Have you not read in the Philoſophers, that the pure is to be ſeparated from the impure, and the purer part is to be ripened? Separate, ſay they, the pure from the impure, and bring it to Maturity. And they call Separation, the waſhing away of the Blackneſs, which being waſht off, the Whiteneſs preſents it ſelf to view? The Fire (ſay they) and *Azoth* waſh *Laton*; *Laton* ſignifies our black Mineral: *Azoth* ſignifies their ſtrong *Acetum*, which wetteth not the hands. This *Acetum*, as well as our *Salarmoniack* [afore-mentioned] hath its Riſe from common Salt. Both of them, as to the external ſhape, and taſte too, and Efficacy and Virtue are in a manner juſt alike. With ſuch an *Acetum* is our black Matter diſſolved into a Snowy-white, pellucid and very clear, water, as you may here ſee. This water have the Philoſophers called their *Mercury*; In it, are hidden all the Colours that are in the whole World, but yet not viſibly evident, afore that this water, or this *Mercury* be put upon the water, [I believe he means, upon the Fire] and be cheriſhed by little and little, like Hens Eggs, which cheriſhing drys up the water by little and little, into Earth, and renders the Colours viſible one after another, as you ſhall preſently ſee.

A. [*Good lack,*] *who would ever have believed, the things which I at preſent See? Our Mercurial water hath been ſcarce three Days in digeſtion, yet begins to change it ſelf into a White Milk. And now it is* [*but*] *the eighth day, and this ſaid Milk goes into a* Coagulum *or Curd, and within in the Glaſs about the Edges* [*of the Matter*] *there ſhines a delicate Redneſs, but yet I believe it is not fixt or Conſtant.*

B. Pray, how can it be conſtant, ſeeing it does but repreſent the *Dragons Blood* and will preſently be gone.

But, proceed you but on with this firſt Degree of Fire only, and that little and little, until the whole water be turned into an aſhy Colour'd earth: When this is done, we will encreaſe the Fire by little and little, one Degree more, which will leiſurely turn the aſhy Colour into a Black one.

A. *I will uſe my utmoſt diligence and obſervancy.*

B. Do you ſee now that ſleeke and ſhining Blackneſs like the Head of the *Crow*, covered over with abundance of black and very ſmall Feathers: And upon this Account, the Philoſophers have called this thus appearing Colour, the *Crows* head. To this black *Crows* head, adminiſter the third Degree of Fire, which will tranſmute this black head into various, moſt delicate Colours, ſhining like ☉ and ☽: Then continue on this degree of Fire, that all the ſaid unſtable Colours may vaniſh, and may preſent to view the white Colour. After Whiteneſs, follows Yellowneſs, which at laſt will be covered over with the conſtant and permanent Redneſs: Which appearing, the fourth Degree of Fire is to be adminiſtred, that that Redneſs may be more and more exalted, and waxing Redder may attain unto its due Fixity and Conſtancy; the which, by way of ſimilitude, the Philoſophers call, a *Salamander*, and is the end of our whole Work.

A. *I ſhould never have ſo much as dreamt, that ſo black a Body could in ſo ſhort a ſpace of time have been tranſmuted into a moſt pure Whiteneſs, and that this ſame Whiteneſs could, by an admirable paſſing through all Colours, paſs into a moſt delicate Redneſs, but I pray, when this Matter hath obtained this Redneſs, is it to be accompted of, as an Univerſal Medicine?*

B. Yes, Verily, becauſe all the curable Diſeaſes of Men, may (by that ſame Matter) be reſtored to former Health; and that ſafer, better and perfectlier than can be done with any Herbs, or any other known Medicaments. I except that Medicament, which is extracted out of this, and concentrated into a much nobler Nature. But, as concerning the Tranſmutation of Metals, it yields not any Profit, afore it be made fixt and conſtant in the Fire; to the effecting of which, there is required a ſufficiently great ſpace of time.

A. *As far as I can underſtand, there may be a yet better and profitabler Medicament prepared, than this is.*

B. Yes, Verily, that there may, a much better and more uſeful, becauſe that with this, there are as yet admixt many unprofitable Feces, which ought to be ſeparated therefrom: And the Caſe is far otherwiſe in the perfecting of this Work out of this Mineral, then in that which is done with Gold, for this is all over defiled with many impurities: For every one muſt needs think, that there are abundance of Feces [that are to be] ſeparated from that Mineral, and by how much the more impurities are ſeparated, ſo much the more efficacious muſt the Medicament it ſelf of neceſſity be. Now in this preſent Degree and State it is brought unto by us, it would be ſufficient for all kind of Diſeaſes; which if we would yet have to be far more efficacious and ſtronger, it would be expedient, that we ſeparate yet the more unprofitable and uſeleſs Feces, and concentrate the more pure Eſſence into a more narrow Room and leſſer Body. For 'tis the Soul only or Quinteſſence of things, that heals Diſeaſes. The ſhells or husks bring no Profit at all, and this the Husbandmen well know; for they ſeparate the husks and chaff from the Corn, afore they bake Bread. The Medicinal Virtues of Herbs and Minerals are but of a ſmall weight, afore they are freed from the Bonds and Fetters of their Bodies: But now, after that they are ſeparated from their Bodies, they can perform incredible effects even in a moſt ſmall quantity, and ſuch as the great weight of that Body, whence they are extracted, will never effect. Look but on a living Man that is in good Health, with how ready and nimble a Motion can he ſtir his Limbs, and what ſtrength he can put forth: But as ſoon as ever the Soul ſhall have ſeparated it ſelf from the Body, how inſenſible and immoveable the Body lies, and not ſerviceable for any Uſe? It is therefore a certain and undoubted Truth, that the Life of all things wanteth weight, and this ſhall be more clearly, and more evidently demonſtrated by the Concentration of this univerſal Medicament. For that which one Ounce, now, does, of this thus prepared Medicament; half an Ounce, when concentrated, will perform the ſame: And that which half an Ounce of this Medicament once concentred will effect; one quarter part of an Ounce, or a Dram of the ſame twice concentrated, will effect the ſame. And according to this compute, may you proceed on farther. For by how much the oftner the prepared Medicament is concentrated, ſo much the more Feces are ſeparated therefrom: And by how much narrowlier the Virtues are contracted, ſo much the greater effects do they produce. And thus there needs not in a manner any weight in Medicinal uſe. That which ten Grains of an unconcentrated Medicament is wont to accompliſh, you will effect the ſame with one Grain of the Medicine, when concentred, to be put either in Ale or Wine for ſome hours, if need be, or elſe held in the Mouth. For ſoe it will no leſs diſplay its occult Virtues and Powers, than if the Powder of the not concentrated Medicament had been otherwiſe drunk down. Beſides too, ſuch a Medicament may be a long time uſed without loſing of its Virtues, and that not only inwardly, but outwardly alſo in all Wounds, Ulcers, and ſuch like external affects. For all new Wounds, as alſo old Ulcers whatſoever they be, are happily cured by the laying on of thoſe Medicaments, if the ſame Medicines be likewiſe uſed inwardly. Nor needs there here many *Emplaſters*, *Cataplaſmes*, and Ointments: Concerning which thing, ſee more in the Fifth Part of my *Pharmacopœa Spagyrica*, where the uſe of this Medicament is treated of.

Read alſo thoſe things, which that moſt excellent Philoſopher *Van Helmont* declares of another certain Philoſopher, *Butler* by Name, *viz.* that he had a certain Stone, at *London* in *England*, which being ſweld a very little in Oyl Olive, rendred the ſame exceedingly Virtuous, that ſome few drops thereof taken into the Body, would drive away the moſt grievous Diſeaſes, and being outwardly applyed to Wounds [or Sores] would ſpeedily heal them. Theſe things *Helmont* teſtifies to be true, as being an Eye witneſs of the ſame. But I do not attribute ſuch incredible Virtues unto my Medicament, for as much as I my ſelf doubted of this Story of *Butler*, and could not believe, that any Medicament could be promoted to this ſo high a Degree of powerful Efficacy: But now, ſeeing I perceive that it is poſſible to Art, for the Virtues of things to be contracted into a narrow Room, and be concentrated; I do upon good ground caſt this doubting off from my mind, and adhere to thoſe things which I ſee with mine Eyes, and touch with my Hands. Certain, and firmly undoubted it therefore is, that not only the Medicinal Virtues and Powers of this our Matter may be contracted into ſuch a narrow Compaſs, as to effect an hundred fold more in Medicine, than that more groſs Body could do: But alſo this

may.

may be acquired or effected too, *viz.* that hidden Colour or Tincture in our black *Magnesia* may likewise be concentrated, together with that Multiplication of Virtues; insomuch, that in the several Concentrations, the Colour of the concentrated Body may be exalted, the which, most high Colour, or exalted Tincture can never at any time be gotten, without our secret Concentration: For otherwise, if there were no need of that Concentration, it would necessarily follow, that that *Magnesia* of ours would be no other than a most pure Body, not at all needing any ablution of its gross, and unprofitable, and black impurity: But this is not so, as we said afore about the Gold, which is pure in its own Nature, and of it self void of all Defilements, and being a ripe Body and mere Tincture, needs no other thing, than this, that its inward Parts be turned outwards, and its outward Parts inward, by that Philosophical introversion, and that so its external Yellowness may betake it self inwards, and the internal Redness may come forth outwards, or (to speak the more clearly) that the manifest Yellowness may be hidden, and the hidden Redness may be manifested. But now, the Case is not thus with this our black Earth, and impure *Saturnine* Mineral; in the which, both good and evil, pure and impure, Poison and Medicine lye mixt together: Insomuch, that it is altogether necessary to separate the black and gross impurity, from that noble and tender Medicinal Pearl, and to reduce it unto Fixity.

A. *With gaping Mouth, and open Eyes, do I even swallow down your Discourse, and yet I cannot pierce into the Foundation of the whole business, nor understand it. You speak of such an artificial Concentration, and which is beyond all my apprehensions, for I never in all my whole Life time heard any thing of it, as far as I remember, much less read ought concerning it.*

B. I will set before you then a Similitude, that so you may the readiler understand the knack. Examine well, and consider, Wine, Ale, or the Lees of Wine; and by your searching you shall find, that there is in them but very little of the Corroborating Spirit, or Soul, the remainder is nothing else but mere impurities, destitute of all Virtues. Now if some Physician or other should administer to his Patient a large Cupful of Lees, to cheer and comfort his heart withal, would you not accuse him of ignorance, and Folly? For though there is somthing of comforting Virtues in the troubled Lees, yet it is impeded, or clogged, by the great quantity of the dreggy Lees, from rightly performing its proper Office. But put Case, that it could display its own Virtues, yet nevertheless, even the admixt impurity would also exercise its own accustomed Evil, and so the Good would be confounded with the Evil, or rather be quite over powred by the same. For this reason, there is nothing more necessary, than that the good be separated from the evil, before any thing be used about making *Medicine.* Therefore even as there are Workmen to be found, who, by the vulgar Distillation and Rectification, do separate the Heart-refreshing Spirit out of the sordid Lees of Wine and Ale, and bring it unto use, give the remaining filthy dreggs and useless Feces to the Hogs to eat: Even so do we (the Lovers of the *Spagyrick* Art) separate the pure Virtues and Powers of things from the gross, sordid, and noxious impurities, afore we administer them to our Patients.

A. *As concerning these Sayings of yours, I am clearly of your Opinion, and withal do stick close to that common Proverb, which saith, Speak that which is Truth, eat that which is baked, and drink that which is clear, if you be desirous of a long Life. For my part, I delight to have the Kernels, and purged or cleansed Fruits, and willingly leave the husks and shells to the Swine, that are delighted with Bran and Chaff, and their own Dung.*

B. I am extreamly satisfied, that I have already (thanks be to God) seen the whole Work, and have a sufficient thorough understanding of the whole Basis of the same, *viz.* that the purer and subtiler part is to be separated from the more impure and grosser part, and, by an often repeated Separation, and artificial Concentration, to be advanced into a most subtile, most pure, and most noble Quintessence, if any one has a mind to produce effects of some great moment, or to do more than common things. And now, as you have learned, from the words of our precedent Conference, the way of making an universal Medicine out of common Gold: So have you likewise again received, from this our present discoursing together, the Confection of the universal Medicament, out of our *Saturnine Magnesia*, which is the *Root* of the vulgar Gold. But, although both of these Medicaments are, as *per se* and singly alone, very excellent and effectual enough, yet notwithstanding it plainly, and clearly appears unto our ken, that the power and Virtues of both the universal Medicines admit of being promoted unto a far higher Degree; the which thing we see is possible to be done by the means of Conjunction, and is to be thus understood. When a Seed is implanted into its own growing Root, it attracts out of such a Root, which is of its own kind, or Nature a far better, and more nourishing Alimentary juice, than out of the gross Earth. For example, The Seed of a *Rape Root* being put in the Earth, produceth *Rapes* of the same bigness that the *Rapes* were of, from whence the Seed came: And as often as you shall commit that Seed (by sowing) to the Earth, you shall, notwithstanding, never have greater and better *Rapes* than those, from whence the Seed was taken. But now, if the Seed of some *Rape* be sown into some other *Rape* which is in the Earth, and which hath grown unto the half of its bigness already; that Seed will sprout forth, and grow up like as the other Seeds planted in the Earth will do, but yet sooner, because it finds a better Nutriment in its own Mother, than that does, which is planted in the bare Earth: And hereupon, it must necessarily produce a greater *Rape Root*, and from the greater Root will proceed a greater Seed. And this is the reason, that there are such great grown *Rapes*, which make every Body wonder at them: Some such I have seen, that weighed ten, twelve, yea and twenty Pound weight. If you have a mind to try, sow a few *Rape* Seeds, throwing them into the Earth, which when they shall have grown to the bigness of an Egg, take a wooden sharp stick, and make therewith a small hole, even into the middle of the said *Rape*, and then put thereinto your *Rape* Seed, and stop up the hole with soft [clammy] Potters clay, that so the Rain may not get in and rot the Root. Thus now, that Seed will also (as being in its own Root) grow up out of this *Rape*, existing and growing in the Earth, and will dilate that its Root, and advance it to a greater bigness. The Reason's this, because it can attract unto it self a better and more convenient Nourishment from a Root of its own kind, than out of the bare Earth. And if you shall practise thus with other Seeds likewise, you will effect the same, as with this. *N.B.* From the Seeds of small *Radishes*, implanted into great *Rape*

Rape Roots, there grow huge *Radiſhes*. This kind of Propagation may not unfitly be likened to a Mothers ſuckling her Infant, which attracteth and draws its Nouriſhment from the Mothers Breaſts: But the Mother it ſelf receives her Nouriſhment from the Fruits of the Earth, and that, being changed into a ſweet Milk, ſupplies the Infant, whereby it is ſuſtained and nouriſh'd. But that I may lay the whole buſineſs afore your Eyes, by a more full Declaration, I will yet farther add one Similitude more. Take you ſome wild and not yet ripe Stock of a *Pear*, *Apple*, *Cherry*, or ſome other Fruit-bearing Trees, ſuch, I ſay, as is not yet full grown, but is as yet conſtituted in its firſt tender Age, take off from it all its Boughs, which bear [but] a wild and ſower Fruit, and Cut it all off even unto the bottom, and to the Stock ſtanding out of the Earth plant a *Cion*, pluckt off from another Tree that does not bear wild Fruit, into this Stock, betwixt the Bark and the Wood of the ſame, where 'tis cut off with the Saw, and fence it well with Wax, or tenacious Clay, *&c.* againſt the Rain: If now you ſhall thus do, and do your work Gardner-like, that fruitful *Cion* will draw unto it ſelf the wild Juice, out of that wild Tree or Stock, and make it better, ſo that it will no more bear any wild Fruit, but ſuch as that Tree did bear, from which the *Cion* was pluckt. If now, ſo ſmall a *Cion* of ſome cultivated and fruitful Tree can ſo change the wild Juice of a wild Stock, that it becomes far better, and more noble: Why, ſhould not Gold do the ſame in our Metallick Tree, when ingrafted in Lead as in its proper Root? Verily in my Opinion, there is not a better Earth (from which that golden Seed may attract unto it ſelf an Alimentary Nouriſhment, and ſo multiply it ſelf even to infinity) to be had, than its own proper Root. But yet, with this Proviſo, that all the groſs and degenerate Boughs be firſt cut off from that ſame groſs Root, for ſo, it will the eaſilier and readilier change its wild and degenerate Juice, (when joyned to the golden Seed or *Cion*,) and ſo will be changed into a far nobler, and produce Fruits a thouſand fold. You ſee, my Friend! what good Will I bear to you, in that I have ſo faithfully opened unto you all thoſe things which I thought neceſſary to be known, for the perfecting of ſo great a Work. Ponder well in your mind, upon the Similitudes of the *Rape* and *Cion*, and believe, that what I have here ſpoken is not caſually and at Random. For they have more hidden under them, than they ſeem to ſhew for, and than you would imagine. Length of time will open your Eyes, which are as yet blinded, as to abundance of things, (if God permit.)

A. *Surely, Sir, I cannot chuſe but wonder anew, when I accurately conſider the things you have declared unto me, of changing the wild Nature, of the wild Vegetative Fruits into a tame, mild, Property: And that ſuch a Tranſmutation of the ignobler Nature, into a more noble One, takes place alſo in Metallick Affairs. They are verily ſuch things, as are of weighty Concernment, and moſt worthy a moſt accurate Conſideration. But, indeed, who can ſufficiently enough conſider of all the Divine Miracles? Bleſſed be his moſt holy Name for evermore.*

B. Amen.

A. *I give unto you, for your courteous inſtruction, moſt hearty thanks, and remain obliged unto you all my whole Life. And thus with what hath been ſaid, I commit both you and my ſelf to Gods protection.*

B. My deareſt Friend, I have now performed the Promiſe I made unto you, and am not meanly delighted, in that you have underſtood the meaning of thoſe things, which I have ſaid unto you: But yet I cannot but admire, that you are not Covetouſly deſirous of knowing yet more, and that you do not Crave an yet more prolix unfolding of more matters. For you well know, that you cannot every day have the Enjoyment of my Company.

A. *For thoſe things, which I at preſent received from you, do I return you moſt hearty thanks, another time God will vouchſafe more: The greateſt deſire I have at preſent, is to ſet about ſo great a Work, and to have the Fruition of the hoped for Fruit. If you are ſo minded, and bent upon doing Friendly Favours, I do requeſt you, that you would oblige my Brother by your good turns, if he ſhall hap to come unto you, and Petition for ought at your hands, for you may aſſiſt him in ſome ſmall, yet good,* Arcanum: *For he hath been ſtupid, or unapprehenſive enough hitherto, and much needs ſome accurate inſtruction. But what ſhall I ſay? The ſick looks after the Phyſician, he that is thorough Well has no need of him. Such things as are hard to be underſtood, exceed his Capacity: The more eaſie things are more commodious. And ſo again, Farewel.*

The COROLLARY.

I Have taught in this Dialogue, *That the White Lac virginis* (after its being extracted, by Diſtillation, out of the Black *Magneſia*, and after its Exaltation, in Virtue and Efficacy, by Rectification and Concentration,) *is to be freed from its ſuperfluous Humidity, and yet the dry Matter is to be made permanent in the Fire, by the gradual Operation of the Fire.* Now for the more accurate Declaration ſake; theſe things which follow ſhall be yet farther ſubjoyned.

That Fixation, if it be to be perfected by the [bare] help of the common Fire, requires a long and tedious time, ſo that there's no reaſon for a Man to perſuade himſelf, that he can finiſh the ſame in one years ſpace. I ſpeak by my own experience, for I my ſelf have tryed, and find that it cannot be, that one year ſhould ſuffice for the finiſhing of this Fixation, for indeed it requires a much longer time. For after that, I had ſo far advanced the Matter, that it had paſſed through all the Colours, as to flow when put upon a Red hot Plate, and to inſinuate it ſelf thereinto, like Oyls penetrating into a dry Hide, yet was it not fixt enough nor conſtant, nor ſerved it for the tinging of the Metals, but when a vehement Fire was applyed thereunto, away it went in ſume; but yet not without an evident Demonſtration of the poſſibility of the ſame. For as much therefore, as it does not yield that ſatisfactory Fruit, [and Succeſs] and ſeeing that ſuch great Labours are not undertaken, without the expectation of ſome Profit, and that the hoped for Fruits cannot however be gathered, afore that the ſaid matter is promoted to a perfect Maturity, and conſequently dreads not any the moſt vehement Storms of the Fire any more; any one may eaſily conjecture, that there needs (as I ſaid afore) a more tedious ſpace of time for this Fixation, if it be to be done and perfected by the common Fire of Coals. But now, he that has the knowledge of the ſecret Fire, of the Ancient Philoſophers, ſuch an one will much eaſier, and ſpeedier, arrive unto the wiſhed end of the Operation. The Nature of the vulgar and fugacious Minerals doth very difficultly and ſlowly admit of that Fixation, which

which is made with the Fire of Coals: And this I was unwilling to conceal from the diligent Searcher after the Secrets of Nature; yet farther adjoyning this Admonition, [*viz.*] that a very profitable Medicament may nevertheleſs be prepared in a ſhorter ſpace of time, and an appearance made of the admirable, and highly delightful Variation of abundance of moſt delicate Colours. For the firſt Colour that appears is like the black head of a *Crow*, preſenting it ſelf to view like the Colour of black Glaſs. This blackneſs going off by little and little, gives place to the White, and pondrous Maſs; which is called by the Philoſophers, the *White Swan*, and not without reaſon, becauſe that ſelf ſame white Matter is not ſo compact and Stone-like, as that black *Crows* Head, but is porous, and not much unlike unto a kind of heap made of abundance of ſmall and white Feathers. When this Whiteneſs is turned into a Yellow, thoſe Feathers vaniſh, and the Maſs returns to its former Compactneſs, and reſembles the form of a yellow Stone: Of which if you put a little piece upon ſome Red hot Silver, or Copper-plate, it will at firſt ſtand like a Red blood, and afterwards penetrate the Copper-plate, and tinge it both within and without with a white Colour; but yet, ſomewhat brittle as yet, and yields in the *Cineritium*, or *Cupel*, ſome Silver, and operates in Medicine ſomewhat effectually, like the white Stone, but yet weaker. It likewiſe pierceth into a Silver-plate, like as Oyl into a Skin, and tingeth it with a yellow Colour, which being ſeparated by the *Cupel*, and diſſolved in *Aqua Fortis*, leaves excellent Gold in the bottom. I have not as yet made any farther Progreſs on the Operation, being quite tired, and weary of ſpending any longer, and more tedious time thereabouts, which however was neceſſarily requiſite to the perfecting of this Tincture with the Fire of Coals. But yet I have by me all the Colours as they follow on after each other, which I can ſhew unto any one; whereby they may ſee with their Eyes the moſt evident poſſibility of Nature: To which end alſo I am minded to preſerve thoſe Tinctures by me, that they may be an everlaſting Memorial of ſo great a thing, unto my Poſterity: But for my part, I will commend [to every one] that ſhorter way of bringing the work to the wiſhed end, by the Mediation of the ſecret Fire of the Philoſophers: Concerning which, the following Dialogue, and the *little Book of Fires*, treats. For the immature Firſt *Ens* of Gold, cannot be excocted [or digeſted] into the deſired Tincture by any thing more eaſily, than in its own proper ſecret Fire; and not by a Coal Fire.

And that it may clearly appear, that I have written the Truth, I will ſend unto ſome of my Friends (God willing) ſome of thoſe white and yellow Stones, to be uſed not only in Medicine, but in *Alchymy* too; that ſo they may make tryal and experimentally find, that Tinctures have a Power of bettering, and amending Metals, afore they have arrived unto the half part of their Fixation.

The Third Dialogue, or Conference, betwixt B. and C. treating of the true Univerſal and particular Medicine of the ancient Philoſophers, (extracted) out of ſuch Gold as is yet fugacious, or Volatile, and immature; (and is) to be ripened by their ſecret Fire; which Operation is by them ſtyled, the work of Women, and play of Children.

C. *GOOD morrow heartily, my Friend! I wiſh you a good and proſperous Day.*

B. I wiſh you the ſame, whence come you to us ſo early?

C. *I have very earneſtly for theſe ſeveral days waited for this hour, that I might ſee you, and have the Fruition of the moſt ſweet Fruits of your Courteous inſtructions. My Brother* A. *ſent me hither, and told me, that you had given him leave to ſend me unto you this day. I do therefore Friendly requeſt you, that you would put a good Conſtruction upon this my Boldneſs.*

B. [My Friend!] I do not in the leaſt take it ill, your Brother told me, that you were as yet ignorant and unskilled, in the more ſubtil *Arcanaes* and Secrets; and that you therefore needed not ought elſe, but ſome pretty eaſie Secret, which might be eaſily underſtood, and performed with ſmall Expences, and yet be profitable and beneficial unto you.

C. *Indeed, Sir, to tell you the plain Truth, ſuch* Arcanums *as are profound ones, and to be penetrated into by a ſubtil Meditation, and which are of great moment, do far outreach my duller apprehenſion: And therefore I do not at this time deſire any thing, more than this,* viz. *that I may obtain ſomething that is not coſtly, and yet may effect ſo much in Medicine and* Alchimy, *as may ſerve me to live a little more commodiouſly and plentifully, as to Food and Raiment. And that you would be pleaſed, to render me a Maſter of this my deſire, is my humble requeſt unto you, again and again.*

B. You do very prudently meaſure out your requeſts, according to your own Capacity. And indeed, ſometimes, thoſe things which are not Coſtly, nor are difficult in their Operation, are more profitable to a Man, than thoſe things are, which they would fain get by the expence of a great deal of Charge, of a long time, and hard Labours: I will grant you your Requeſt, and therefore hearken.

C. [*Sir, I thank you,*] *and do liſten.*

B. Have you never read, or elſe heard from others, that thoſe moſt ancient Philoſophers, tell us that their univerſal Work, is not only moſt eaſie to be done, but withal no ways Chargeable. For they do openly Confeſs, that to the perfecting of their Work, a Man needs be at no more Expences, than two *Florins*, and that the Labour it ſelf, even from the beginning to the end, is nothing elſe but mere Womens work, and Boys play.

C. *You are pleaſed to offer me delicate Dainties, eaſie to be prepared, for I have not ſo much Money as is to be laid out upon thoſe kind of chargeable and coſtly Labours: Neither will my Family Affairs admit thereof,* viz. *to ſpend my days in ſuch ſumptuous and chargeable Cookeries,*

and which are ſo full of moſt great Labours, and whoſe event too is oftentimes very uncertain. For I have heard ſome ſay, that the ſmalleſt Errour may deſtroy the whole Work, and quite ſpoil it, and ſo grievouſly affect ſuch as operate about ſuch great Secrets, with a very great loſs of long time, and great Expences. And therefore ſuch a Work, as I can attend upon without letting my taking Care of my Family, and which will need the diſburſment of but a few Expences, will pleaſe me better than thoſe other Coſtly ones would.

B. I readily believe, that this very thing you deſire, will not only be exceedingly pleaſing unto your ſelf, but alſo unto many others beſides. The Expences are but very ſmall, and the Labours thereupon but little, ſo that each days Fire, which the Matter is to be ſet upon, may be taken Care for, in half an hours ſpace. But now, though the Philoſophers have made mention of very ſmall Expences, and have compriſed them in the compaſs of a couple of *Florins*, yet is that ſaying to be otherwiſe underſtood. Thoſe Ancients made uſe of the greateſt *Florins*, *viz.* the *Rheniſh* ones, and alſo the *Hungarian* Crowns, each of which is of the value of five of our *Florins*. And if you thus underſtand it after this compute, I can eaſily ſhew unto you the Truth of their Aſſertion.

C. I do even think as you ſay: Sure we muſt not expect any [ſuch] things for nothing; I am content, [and therefore, pray] let us proceed.

B. If our Work be called the labour of Women, and Boys play, it is expedient, that it be like unto Womens work, and Boys play: For elſe the Philoſophers would have uſed an unfit ſimilitude. You well know, what Labours your Wife is chiefly buſied about, and what her daily Labour is ſhe imploys her ſelf in.

C. Yes, verily I daily ſee, that ſhe doth boyl Food neceſſary for the Uſe of the whole Family, and being boyl'd ſets it upon the Table to be eaten. This Labour ſhe performs, at leaſt twice every day; when Dinner and Supper is ended, ſhe doth waſh the Diſhes, Pots, Goblets, and other Veſſels, and cleans them, and makes them fit to put other new Food in, and to be ſerved out to the Table. Beſides too, this is her Office and Care, if haply a Pot be broken, or crackt, whereby it is made unfit to hold moiſture any more, to ſubſtitute (in defect of Iron Pots) a new Pot made of Potters Clay, in the ſtead thereof: Such and the like Labours, as theſe, are in our Country called the Womens work.

B. Well, be it ſo: I will likewiſe ſhew unto thee, ſuch a Labour in *Chymical* Operations, as reſembles this. Therefore, like as the Female Sex do firſt waſh the *Fleſh*, *Fiſh*, *Rapes*, *Pot-herbs*, *Roots*, *Apples*, *Pears*, or other things with pure Water, which they mean to boyl, and then put them into the Pot, and pour thereunto as much Water as is requiſite, and place it over the Fire, and boyl it ſo long, till all the crudity, or rawneſs being vaniſht, the Meats become grateful to the Palat, and pleaſant, and eaſily digeſtible by the Stomach. [So do we] They do likewiſe ſometimes pour Wine upon Fleſh and Fiſh, inſtead of Water, and add as much Salt as is convenient, together with ſome Spices, or odoriferous Herbs, by which they give the Fiſh and Fleſh a moſt excellent Taſte. But yet we muſt not forget Salt, above all the other Spices, or Seaſonings, and odoriferous Herbs, for it Corrects and maturates the Fleſh, Fiſh, and other hard Meats, more than other Spices. For we can well enough want theſe if they are not at hand, but as for Salt, there is always need of that, about the boyling of Fleſh, Fiſh, and other Food. If therefore Fleſh, or Fiſh are to be boyld well, then Salt water is requiſite; and as for all the other Additions of Herbs, and odoriferous Spices, they only ſerve to give it a good pleaſant Taſte, and make it acceptable to the Palat, and to the Smelling. For the Fleſh and Fiſh when boyl'd or ſtewed, do by their Magnetick Virtue attract ſo much Salt and grateful Savour, and Virtue, as they need: And that which remains, ſtays in the Water. Now the curious Dames do ſhut the tops of their Pots very well with their Covers, leſt the efficacious Vapours ſhould be forced away in fume by the Boyling, and not ſtay with the Fleſh or other Meats. But the careleſs Houſewifes do not much regard the covering of their Pots, from whence it comes to paſs, that they loſe theſe good and ſweet Spirits, and then they fil up their Pots with new Water, by which doings, the Fleſh, or Fiſh, do not get ſo ſweet a Savour, as they would have, if that efficacious Water had been kept in and conſerved. Some Women that are yet more curious, and diligent about their Cookery, do put upon their Pots, wherein they boyl their Meats, ſuch a Cover as hath a fold in it, by which the Collected ſweet and odoriferous Vapours may diſtil down into an under-put Veſſel, which being thus gotten, they keep by them, to refreſh and cheriſh with them, ſuch as are weak and ſick, when need requires. Others, to free themſelves from this kind of Labour, do add as much Water as need is, together with Salt and Spices, to their Fleſh, and ſo boyl it by little and little, ſhutting in the Vapours with a Cover, which elſe would go away, and the Meat taſte of burning. And by doing thus, they are not neceſſitated to pour on any new Water, though this ſlow boyling takes up more time than that, which is done by a ſtrong and unceſſant Ebullition: I would have you well to obſerve theſe things, for 'tis not without cauſe that I utter them. And now let us examine the other ſimilitude, and ſee what thoſe Boys Plays are, that ſo we may afterwards accommodate even them too, to our Philoſophical work. What therefore do you ſee concerning the Boys Plays, with what things, and after what manner do they Play?

C. How can I tell? They play as their Parents pleaſe to let them, or as they can get opportunity of Playing: As for my ſelf, I do not grant my Children ſo much Liberty, to play when, and how they liſt themſelves. I ſend them to the School and to the Church, and ſometimes I allow them one hours Play for Recreations ſake, nor do I allow them any other Play but at Bowls, [or Knickers] by which they moderately ſtir their Bodies, and exerciſe themſelves, and Concoct their Meat, and this is far more profitable for them, than if they were conſtrained to ſit always at home, without any exerciſe at all: Other play than this, I allow them not. Cards and Dice are unfit Plays for Boys, they are many times very hurtful to thoſe of riper years, eſpecially when by the too much abuſe of them, they do ſo unprofitably waſte their precious time, and cannot tell how to uſe a mean. I have indeed otherwiſe ſeen Boys, that meeting with ſome Sand get [thereout of] bright Stones, and play with them, but yet this is not uſual. However, there is no play more frequent amongſt Children, than that of Bowls, [or Knickers] which play they daily uſe, whatſoever time they can ſteal, to that purpoſe. Yea both at their going to School, and returning from School, you may ſee them preſently buſied about their Rubbers, or Knickers-play. They are very hardly reſtrained therefrom. If they want Money to buy the Bowls, or Knickers, they get a little piece of Potters Clay and moiſten it with Water, and make up their little Bowls, or Pellets in their hands, and harden them

in

in the Fire; which I remember, when I was a Boy, I often did. And beſides this Boys play, no other is known unto me.

B. Very good, you have hit the nail on the head: And now let us ſee, whether or no the ancient Philoſophers have (after the manner of Boys) played with ſmall Bowls, or Knickers? and whether, or no, they have boyl'd their work in Pots, with as eaſie a Labour, as Women do. For of neceſſity they muſt have hit on doing after this wiſe, elſe could they not have compared their work to the Labour of Women, and play of Children. So then, if we are to imitate Women and Boys in our Operation, what Matters are we to make uſe of, for our boyling, in the ſtead of Fleſh, Fiſh, and other Meats; and what Water is it, that is to be poured thereupon. For if we are minded to do any good effect, 'tis expedient, that we likewiſe know, what thoſe Matters are, which admit of being boyled unto a Maturity in our fiety Water, and theſe verily muſt be ſuch, (ſeeing they are to be *maturated by boyling*) as have a great Affinity with the ſaid Water: Foraſmuch therefore, as our Water is of a *Metallick* Nature, and yet all the Metals do in a manner ariſe, or proceed (in the Earth) therefrom, and are even at this very day advanced, by the very ſame (by the help of the Terreſtial and Central fire) by little and little unto perfection: All that we have to do is, to imitate the ſimplicity of Nature, which will never ſeduce us, for ſo without queſtion, thoſe moſt ancient Philoſophers did do, who having borrowed their wonderful Work from Nature her ſelf, do adviſe us to do no more, but to follow Nature, and to begin there, where Nature left off, and to aſcend higher and to make that perfect, which is as yet imperfect. God hath prefixed unto Nature her bounds, which ſhe cannot tranſgreſs [or go beyond:] But Art, doth much excel Nature, and performs thoſe things which Nature cannot accompliſh: Yea more, that which ſhe can hardly do in the Earth in a thouſand years time, Art effects in one year, and this is eaſily confirmed by many Teſtimonies. Now as to the Generation and Maturation of the Metals, Nature uſeth a moſt ſimple or plain way, a very ſlow one, but yet ſafe. From thence ariſeth the Errour of many a Man, who do not follow Nature, but the guidance of their own phantaſtick Brains, never effecting ought of good, but remain always Novelliſts in the ſame, what Labours ſoever they undertake, and what Expences ſoever they are at: Although the ancient Philoſophers do by their many Admonitions ſet afore us, that moſt ſimple Courſe of Nature for us to imitate; and they have eſpecially hinted to us, that their Work is ſo ſimple, that ſhould they but openly and clearly have treated of the ſame, even the Women would deride it and ſay, that the Male kind had learned their Art from them. Yea, it is ſo very vile a Work, that no Body would be able to believe it, and upon this Account, the Philoſophers have done their utmoſt, to hide and obſcure the Art the moſt they could, leaſt they ſhould be contemned by the proud deriders, (who Soaring aloft ſeek after things too high for them,) and be accounted for Cheats and falſe Writers. And this is the main and chiefeſt Reaſon, why this Art being ſo wrapt up in darkneſs of a moſt profound Silence, lyes hitherto hid from the whole Troop of Sophiſters, and ſuch deriding Fellows. *Sendivow* (as we have already ſeveral times hinted) doth expreſly ſay, that he had oftentimes declared the whole Art, to not a few word for word, unto whom, that Art did nevertheleſs ſeem ſo very vile and mean, that they could not at all believe any likelihood of Truth in his moſt true words, and ſo left the Work unattempted. The ſame *Sendivow* doth alſo ſay, That had the moſt skilful *Hermes*, the moſt quick-witted *Geber*, and moſt illuminated *Lully* been again alive, and beheld our Laboratories ſtored with ſo many, and ſuch various Inſtruments of Glaſs, Earth, Iron, and other Matters, and ſuch ſeveral Fornaces, they would be raviſhed into a moſt high Admiration, like ſo many Boys, and would be but as it were our Scholars, as concerning thoſe Veſſels and Fornaces; all which however, we have learned from their Writings, but yet we are deſtitute of that moſt excellent Work which was wrought by them in ſo ſimple a Way, and it hitherto flies our ſubtile and acute Wits. And, my dear Friend, he alſo tells us, that we ſhould fly aloft into the lofty Air with our Wings, for the Work is ſimple, vile and abject, the which, you may ſooner comprehend [or feel] with your hands, than apprehend by the ſubtilty of your Wit or Cogitations.

C. All theſe things may very ſufficiently ſerve to rid us out of ſo great a Labyrinth; but I pray, Sir, how comes it about, that we do ſottiſhly perſuade our ſelves, that thoſe things are ſo very difficult, which notwithſtanding are ſo very ſimple, vile, and abject.

B. It is indeed, to him that has knowledge of the ſame, an eaſie, vile, and ſimple thing: But very difficult and intricate to him, that laying aſide the way of Nature, thinks himſelf able to learn ſo great an Art out of Books, which (by their leave) though, ſeems a thing almoſt impoſſible to be done. For the Philoſophers have ſo prolixly, intricately, and obſcurely deſcribed the whole Myſtery, that their ſo prolix and dark Writings would ſooner lead a Man from the true and right way, ſo far off are they from reducing him thereinto.

C. I my ſelf find, that this is moſt certainly true, for I never heard as yet of any Man, or read of any, that learned the Art out of Books: But that almoſt all of them who were ſkilled in the ſame, do Confeſs, that they became Maſters of the ſame, either by Divine Inſpiration or Revelation, or by the help of ſome Friend. There's no Body can contradict thoſe things which you have here induced, for the Confirmation of your Opinion. And now, Sir, let us ſet upon the Work it ſelf, and diligently pray unto God and wait for his Bleſſing.

B. Content, hearken therefore attentively.

C. So I do.

B. Did you never find in the reading of the Philoſophers, that all the imperfect Metals may in a *Particular* way be promoted to the perfect Maturity of Gold or Silver, by their dry Water which wetteth not the hands: But being not content with this effect, they have promoted the firſt *Ens* of Metals (by the help of their occult, fiery, and ripening Water) to a more than perfect Conſtancy, and Fixity in the Fire, and have concentrated it to the form of Gold.

C. I remember, that I have read of ſuch things as theſe, though by reaſon of my unskilfulneſs and ignorance, I could not underſtand the leaſt Particle of their meaning: For I am altogether ignorant of that kind of wonderful, and yet, to every Body well known Water: And ſo ſhall ſtill remain until it be ſhewn (and pointed at) with the Fingers.

B. Look here, here's a piece of admirable Water which is every where in all places eaſie to be found, yea, in the pooreſt Country-mens Houſes, nor doth it deny any Man, the Poſſeſſion and having it.

C. Who would ever have believed, or thought, that there was any good hidden in ſo vile and abject a Body?

[*B.* I

B. [I wonder] wherefore [it is] that no Body can think of this Matter, ſeeing it is evident, that in our Water the firſt Entities of all the Metals are abundantly hidden, as in their own proper Seed, out of which they are generated in the Earth, and ripened unto perfection. Thoſe firſt Entities are but extracted out of this our Water, by [peculiar] Magnets. And now, like as every Metal hath its own Magnet, even ſo every one [of them] hath its proper Magnet, by which it is concentrated into a narrow Room. I will declare unto you the Truth of this buſineſs, by an example taken from the Metals. If you have a Water fully impregnated with Copper, and you deſire to have Copper out of the ſaid Water, you will eaſily bring this to paſs, if you ſhall but put in to that Water, which holds in it the Copper, a piece of clean Iron, the which Iron, (as being the true Magnet of the Copper,) will attract unto it ſelf, all the inviſible Copper out of the Water, and gather it into a viſible and palpable Metal. If Silver be diſſolv'd in any Water and made inviſible, and you would again have it, put into the Solution a Plate of pure [or clean] Copper, which (after a Magnetick manner) will gather together [or draw out] all the Silver in his own [Silvery] Body, and make it viſible and palpable. Now when Gold is diſſolved in ſome Water, and largely diſperſed, [as I may ſay] and you would again have it [in the form of Gold;] then put in ſome ☿ or *Ar. vive* in that Water, and boyl it a little therewithal, (as was done above, with the Copper and Silver) and you ſhall preſently ſee all the Gold to be attracted, and gathered together by the *Mercury*, inſomuch that there will not remain ought of the Gold in the Water, becauſe it follows the Attraction of its own Magnet, *Mercury*. Theſe *Metallick* and *Magnetick* Operations, are a ſufficiently manifeſt Information unto us, and do point out unto us (as with a Finger) the way, of the extracting, not only good Metals in a *Particular* manner, but alſo far better things than Metals, (*viz.* the Tincture, or form of Gold) out of our ſtinking Water, in an *Univerſal* way, by ſuch Magnets, as are fit and apt in Nature for this Extraction. Another ſimilitude we have from the Earth, and Rain water, with which the Fruits of the Earth are moiſtned: Put you in ſuch an Earth moiſtned with that Water, as many Seeds as you pleaſe; each of them, will (by its *Magnetick* Virtue) attract unto its ſelf, its own like, for its Multiplication, and will leave to the other Seeds, to attract each of them its like alſo. If now, by this ſimilitude, the Scope or end I aim at, may be made manifeſt unto you, there is yet hopes you may be holpen: If not, I do not ſee, by what means you can be ſuccoured, foraſmuch as it would be too tedious here to uſe many other Circumſtances. For when we are certainly aſſured, that the firſt *Ens*, or the very Form of Gold is plentifully hidden in our Water, we do by very good right ſeek after that beſt part, *viz.* the form of Gold, and leave the other firſt Entities of the reſt of the Metals, in the Water. And now Ile ſhew thee another ſimilitude: Diſſolve in one and the ſame Water, ☉, ♀, ♂, ♃, ☿, that ſo you may have all theſe Metals commixt together in the ſame: If now you deſire to extract the beſt of them, *viz.* the Gold there out of, what hurt will the other bring you, if they remain in the Water. Such therefore as the Magnet is, which you put into that ſame Water, ſuch is the Metal too, that you ſhall extract. If therefore we particularly ſeek ☉ and ☽ in our Water, it will be expedient, that we put unto this ſpiritual ☉ and ☽ their proper Magnet, unto which Magnets, they (being precipitated) do ſtick on, and are by little and little fixed [on thereunto.] And now if we ſeek after ſomething better than ☉ and ☽, *viz.* the form and Tincture of Gold, it will be neceſſary, that we alſo apply ſuch a [ſuitable] Magnet, which may draw out nothing elſe but the Tincture or Form of Gold, which being precipitated [thereout of] may be fixed. And thus have I here told you all thoſe things that are neceſſary to be known. If you are minded to extract in a *Particular* way, *Sol* and *Lune* out of the Univerſal Mineral water, you muſt then put unto them their Magnet, *viz.* an *Amalgama* of Copper, and *Argent vive*: For the Copper draws to it ſelf the ſpiritual Silver, and the ☿ the ſpiritual Gold, out of the ſaid Water, and brings it unto a Fixation [or Corporeity] with it ſelf, [or, as it ſelf is.] But if you are minded, or deſirous, of getting ſome better thing, than the Gold it ſelf, or Silver, is, *viz.* a Tincture, you muſt then needs adjoyn thereto its own peculiar Magnet, for, without it, you cannot effect any thing at all: But that you may know, what the true Magnet of the Tincture is, I ſay unto you, *That is the Compeere, or Companion of our Water, and not of the Metals:* For like ſeeks its like, as the Philoſophers ſay, Nature rejoyceth with Nature, Nature overcomes Nature, Nature retains Nature: More than theſe things I have told you, it is not needful for you to know: Conſider therefore very accurately what I have ſaid, and beg of God by your Prayers a bleſſing, which if you do, you ſhall not err, but yet you will not be all of a ſudden Maſter of what you deſire. All theſe things have their determinate times, like as a Grain of Wheat ſown in the Earth, the which requires a time to ripen in, nor doth it wax ripe afore the time appointed for Maturation be come about. Follow you the Advice left by *Geber*, and do not haſten on your Work, by any the leaſt haſty ſpeed: For he tells us expreſly, that all haſtning in our Work is of the Devil. And as concerning what is to be known, and what a one the Student of ſo noble an Art ought to be, you will find deſcribed in the Fifth Part of my *Spagyrical Pharmacopæa*. And what think you now? Can you thoroughly underſtand me?

C. *Yes, Verily, I do well enough underſtand thoſe things which I have hitherto heard from you; But yet this Womens work, which you began a Declaration of, is not ſufficiently clear unto me, nor is that Boys-play, which is done with ſmall Bowls or Knickers, I do not thoroughly underſtand that neither,* viz. *how it may be compared with the work of the Philoſophers. Were but theſe things made clear and evident unto me, I would Ranck my ſelf amongſt the number of the Maſters of the Art.*

B. Well then, come let us go on and ſee, by what means the Philoſophers are wont to make their little Bowls. [Note!] Like as the Boys make uſe of Earth and Water, for the making of their Pellets or Knickers: So likewiſe will we uſe our Earth, and our Water to the making of our ſmall Bowls or Pellets: Ours, I ſay, not the vulgar and common Earth and Water, for they are unprofitable as to our Work. But tis indifferent, and all one, whether we take Yellow, Red, or white Earth, becauſe all of them are of one and the ſame Nature. According to the Colour of the Earth which we uſe, will the Colour of the ſmall Balls we make, be: We have here at hand a threefold Earth, a yellow Earth of Gold, a white of Silver and a Red of Copper. This threefold Earth will we moiſten with our Water or *Mercury*, and ſo make up a Paſte or Maſs of the two, which the *Chymiſts* call an

Amalgama.

Amalgama. This Paſte will we waſh with pure Water, grinding it ſo long 'twixt our Fingers, till there be no appearance of any farther impurity, and that it admits of being eaſily waſht, or broken with the Fingers. Being thus well waſht, we will put it in a Skin, or Cotton, and tye it firmly in; out of which, we will ſqueez forth all the ☿ with our hands, and ſeparate it from the ſaid Earth, juſt in ſuch a manner as *Argent vive* is ſeparated in *Amalgamations*, or *Metallick* Maſſes. The *Mercury* being ſeparated, we will take out our thick *Amalgama*, and make ſmall Bowls, or Knickers thereof, and of almoſt the ſame bigneſs, that the Boys Knickers are of. Theſe Bowls we will expoſe to the Air, for about ſome twenty four hours, and by this time they will be grown ſo hard, as to reſemble Stones, in hardneſs. And now, being thus made ready for boyling, we will put them into our Water to ſeeth: But yet in the ſeething, there muſt be an accurate regard had to ſome skilful handling the Matter, if you would have it perform its Operation without Errour. This Art will I faithfully open unto thee, leſt you err, and ſo bring damage upon your ſelf: Theſe Pellets, or little Bowls thus made of our Maſs, are not to be thrown into the Pot filled with Water, afore the ſaid Water boyls: Which boyling, you muſt throw them in one after another, and they will preſently harden themſelves, and cover themſelves over with an hard Cruſtineſs or Skin, by which they will be prevented from ſticking to one another, and from coming altogether into one Maſs. For if you firſt of all put your little Balls into the Pot, and then afterwards pour cold Water upon them, and ſo ſet them on the Fire, that they may be boyled unto their Maturity, you will ſpoil your whole Work. For before the Water in the Pot be hot, all the Pellets being diſſolved, would run together in one Maſs, and ſo would not admit the Humefying, or moiſtning of their inſide Parts, and ſo you would turn all your Pellets by your ſeething into a mere Pouſe or Pottage, whereas they ſhould remain whole in all their Parts, as well internal, as external, for fear of drawing the Water in. But that you may have an accurate Account of all theſe things which I have ſaid unto you, I hope you will ſet about the Work, [or thus,] I hope you will do your beſt, heedfully to regard all theſe things which I have ſaid unto you] and I ſuppoſe, that you have ſufficiently underſtood the things which I have already ſpoken: But if ſo be, you do not yet apprehend the meaning of theſe things, I will Counſel you, by what means you may learn this Operation at home from your Wife. When you are come home, bid your Wife to make you ſome little Balls, or Dumplins with Flower and Veal. And heedfully obſerve, what Courſe ſhe takes, about making ſuch Balls, that ſo you may by the ſame way learn to deal with your *Metallick* Pellets. Firſt of all, you ſhall ſee, that ſhe puts ſome pure Flower into a deep Diſh or Platter, and having put it in, ſhe works it into a Paſte, or Maſs with Cream, or the pureſt Milk. Then ſhe admixeth ſome green Herbs ſmally minced, and ſome Spice medled among, and ſprinkling ſome Salt thereupon, ſhe mixeth them with the Paſte made as aforeſaid, to give it the ſweeter Smell, and Taſte. Of this Paſte, ſhe will afterwards make little Balls, of what bigneſs ſhe pleaſeth, which Balls ſhe does not put in the Water afore it boyls. When therefore the Water ſeeths, ſhe throws in, one Ball after another, each of which, as ſoon as ever it feels the fervent heat of the boyling Water, will preſently cover it ſelf over with a Skin, whereby they will be kept from ſticking one to another, and running into one Maſs, and returning into ſuch a Paſte as they were in, before their being made up into Pellets: Whereas, now each of them may be kept in its own Form, and be encompaſſed all round with the Water, and be advanced unto a Maturity, or readineſs, by a due ſeething: And now, when you have ſeen this Operation of your Wives Cookery, I do not queſtion, but that you will be well enough skilled in this Cooking Art.

C. *My deareſt Friend, I do friendly requeſt you not to take it amiſs, in that I cannot abſtain any longer from down right laughing, when I hear that our work hath ſuch a correſponding likeneſs, with the Art of Cookery: Your ſo faithful Inſtructions have already abundantly ſatisfied me: I have very often ſeen my Wife buſied about the Cooking of ſuch Balls, and my ſelf have alſo delightfully fed upon theſe kind of Dumplins, made both of Veal, Eggs, and Spices, and alſo of Flower, Milk, and green Herbs. But I fear me, that when my Wife ſhall ſee me making theſe Balls or Pellets, and boyling them in a little Pot, ſhe will laugh at me, and ſay, that I learned my Skil from her.*

B. 'Tis no Matter, you have no reaſon to regard either the tatling of your Wife, or of all Men whatever: For they know not what they do, it is enough for you, that your ſelf know what end it is, you do any thing for: Think you, that if other Wiſelings and Know-littles ſhould ſee you working with ſuch little Balls, they would not deride and mock you. But don't you at all mind their unprofitable Prating, leave the ſhril-ſounding Geeſe to their own loud Chatling, and follow you my Doctrine, and wrap up this our Cookery Art in the darkneſs of Silence: Which if you do, you need not fear of being mockt, or laught at by either Women, or Womaniſh Men.

C. *I have now (praiſed be God) learned enough: But yet, there is one thing I am ignorant of, and that is this, by what ſign I may come to know, when my Pellets are well enough boyled, and what Fire they are to be boyled in. The Fire of Wood and Coals, I know is uſed by the feminine Sex for to boyl withal, but whether or no, the ſame be neceſſary and conducive to our Operation, I requeſt you to inform me.*

B. Have you never ſeen, what proof Women have to know, when their Dumplings are well boyled? They are wont to take one out, and cut it in twain, that they may ſee, whether or no the inſide, as well as the outſide of the ſame be ſo well ſeethed, as that the Flower is not any more tenacious or Clammy: Do you even the ſame, and ſometimes put a piece of one of your Pellets you take out, in the *Cineritium* or *Cupel*, and that will ſhew unto you, how much increaſe of *Sol* and *Lune* hath particularly added its ſelf to your Balls, in that time of the boyling, and how long they are, as yet, to be boyled. Now you know, that all theſe things are to be ſearcht into, by your own Meditation and Tryal, becauſe it can not poſſibly be, that all things can be ſo very clearly ſet afore ones Eyes, as to need no farther meditating thereupon, and inquiſition thereinto. After this manner may you boyl in one Pot, with one and the ſame Water, two, three, or more little Bowls, of different kinds, as, ſome made of Flower, green Herbs, Spices, Fleſh, Eggs, Fiſh, and other things, and ſo, after the ſeething of them, you make take forth one kind after another, and *Particularly* apply them to your Uſe. For theſe things are to be underſtood concerning *Particulars*. But if you have a mind deſirous after the *Univerſal* Medicine, then muſt you enter upon a certain way of almoſt an whole entire year,

which is neceſſarily requiſite to the finiſhing of its Operation. For our Magnet, whoſe Task it is to extract the *Form* of the Gold out of our Waters, doth as yet groan under its immaturity, and therefore needs no ſmall ſpace of time, for the extracting the *Tincture* out of our fugacious and combuſtible Waters, and fixing it with it ſelf.

C. *Theſe Words of yours, by which you mention ſo long a time, do not a little affrighten me. Our Wives can boyl their Dumplins enough in one hours ſpace; what will ſuch a continued boyling coſt? I would be glad to redeem it, [or, to be excuſed] for the price of two Golden pieces of Money [or Duckets.]*

B. I ſhould tell you, that you are of the Off-ſpring of unbelieving *Thomas*, for you heap upon your ſelf, by your needleſs incredulity, ſuch heaps and Loads of Cares. Don't you remember, that I told you at firſt, that the Charges of the whole work, from the beginning to the very end, do not exceed two Golden pieces of Money, which they call Duckets. And that I do not at all tell you an untruth, I will expound it unto you by an evident Demonſtration. When you ſhall heat your well covered Pot, that ſo your Water may not vaniſh away in fume, with the ſmall fire of a Lamp, how much I pray will ſuch a Labour coſt you? Put Caſe, that ſome Pounds of water coſt you ſome *Aſſes* or *Stivers*, and the Magnet doth alſo coſt you ſome *Stivers*, [ten *Aſſes* are a *Roman* Peny, which is Seven pence half Peny of our Money] and now how many Pounds of Oyl will there need to nouriſh that ſo little a Fire? And though you ſhould ſpend forty, fifty, or more Pounds of Oyl, may not you well ſay, that you ſhall finiſh the whole work, for the Charge of two Golden Duckets. Well! what ſay you? Are you yet Content?

C. *You do now again ſomewhat encourage my mind, which had almoſt fainted, by telling me, that the Matters neceſſary for our Work are ſold at ſo mean a Price. But there's one thing ſtill that doth not a little trouble me, and that is, that ſo much time is required to the Fixation. All the other things are as well as I could wiſh: But, I would fain have had that ſhorter work of three hours, or ſeven days.*

B. O thou Dreamer, what have I to do with thee? What? doth that ſpace of time, wherein ſuch excellent and moſt profitable Fruits are to be hoped for by thee, ſeem too long? What doſt thou think to get without length of time? Good things are not wont to offer themſelves without Proceſs of time, as the common Proverb tells us. Mean while you may follow your Vocation, nor needs there any other Labour, than that you look to your Lamp Morning and Evening, and ſee how the Fire is. And I pray, are not the Country men conſtrained to wait their time, wherein to reap, and again to receive the Fruits which they committed to the Earth? And though they have ſown their Seeds afore the approach of the Winter, yet they cannot reap them again from the Earth, ſooner than the next following *Auguſt*, which then rewards and recompenſeth all their hard Labours. But now, the waiting ſo long a time does not tire them; for they patiently expect the time of Harveſt. Thus likewiſe are you to do, but if you are greedily deſirous of ſooner making ready your Pellets, or Balls, by the boyling, you may I Confeſs, have a ſooner ending of your expectation, and that on this wiſe, *viz.* by a ſtronger Fire, which may make your Water boyl without any ceaſing, but yet in this ſame way of Operating there doth again happen this trouble, from that ſtrong and inceſſant ſcething, *viz.* that your Water being without any intermiſſion reſolved into Fume and Vapour, is always leſſened, and you muſt of neceſſity be always pouring in more new. Uſe which of theſe two ways you pleaſe, for you are e'en importunate and troubleſome enough unto me. I will not, for the time to come, take on me to inſtruct any more ſuch Diſciples as you are. What do you think, that if that ſhort work of three days, or of ſeven hours were known unto me, I would preſently reveal it unto you? No! But yet I am not gotten to ſo high a Degree of knowledge, as to profeſs my ſelf a Maſter of ſo great an Art. I do believe though, that ſuch things are poſſible to be done, but I deny, that I my ſelf am able to do ſuch notable things. And now, go home in God's Name, and diligently and ſeriouſly meditate upon all theſe things: You have heard enough, and my time will no longer permit me to confer with you. If perhaps, one or two Errours ſhould put a ſtop to your proceedings, you may again come unto me, and ask me thereabouts. Mean while I commend you unto God, and pray him to beſtow his Bleſſing upon your ſelf, and your Labours.

C. *Now am I contented, nor know what farther I ſhould ask: I am ſorry, that I have ſo much troubled you by my dull Brains, and beetle Head, and been ſo importunate: Nor know I, how to requite your deſerts; God will reward you with Life eternal, I ſhall go home full of joy, and bear a glad Meſſage, and Tidings unto my Family. And I pray God to be at all times preſent with us, to our Help and Succour.*

B. Amen.

The COROLLARY.

I Have, in this Third Dialogue, made mention of a certain ſecret fiery Water, which can ripen the Volatile and immature Minerals, and Metals: And herein I have principally regarded a *Particular* Tranſmutation. But foraſmuch as a *Particular* Melioration of the Metals requires as much time, and no fewer Expences, than the *Univerſal* it ſelf does, I would here commend to the Sons of Art the *Univerſal* work, which is to be preferred before a *Particular* one. Such things as we have perhaps omitted in this Dialogue, the Deſcription of my fourth ſecret Fire will ſufficiently ſupply the defect; to which, I refer the friendly Reader. He will there ſee and underſtand, that the greateſt part of the whole Work, and the very hinge of the ſaid Operation, conſiſts chiefly in the true Veſſel, in which our Matter is to be ripened; and without the knowledge of which, there can never be any thing done to purpoſe. Which Veſſel, ſeeing that all the Philoſophers have covered over, and hidden with ſo great a Care and Diligence, and have involved it with ſuch obſcure Clouds of darkneſs, I ſhould do amiſs, yea, moſt extreamly amiſs, ſhould I lay it open, and bring it from out of thoſe dark inwrapments, into the Light. Thus much only I ſay, that it ought to be ſuch a Fornace, and the Veſſel it ſelf ſuch a one too, as in which, all the Chymical Operations, *viz.* Solution, Putrefaction, Diſtillation, Sublimation, Cohobation, Aſcenſion, Deſcenſion, Circulation, Inceration, and Fixation may be perfectly ſhewn unto an *Hermetick* Diſciple, or Learner, in one hours time, in one little Fornace, in one Glaſs, and in one Fire, all which muſt not coſt more than

than the value of one quarter part of a Doller, and is all done without any changing of the Glaſſes, or putting to, of the hands of the Operator. Theſe are indeed ſuch things as exceed all the belief of the whole World, but yet they do not exceed *Glauber*'s faith, nor ſufficeth it him only to believe, but he can alſo effect the ſame, that ſo other incredulous people may believe likewiſe.

N. B. On a certain time, as I was familiarly diſcourſing with a learned Man, concerning ſuch great and incredible things, he preſented me with theſe following Verſes, aptly agreeing to this Matter in hand.

*Thy *Sirname* (Glauber!) *given was, as, unto* Faith, *relating* *John.
Yet by good right it ſhould have ſquar'd unto thy Operating.
Faith's Objects are inviſible, but yet, ſuch things, do you,
As would at firſt be ſcarce believ'd, produce by Art to view.

A Short Expoſition upon the Helliſh Goddeſs Proserpina, *the Wife of* Pluto, viz. *what the Heatheniſh Philoſophick Poets, as* Ovid *and* Virgil *underſtood by it.*

And how, by the help of this Proſerpina, *the* Animæ, *or Souls, of the Mortified* Metallick *Bodies are carried out of the Chymical Hell into the Philoſophick Heaven. Tranſlated out of the* High-Dutch.

READER, that we may ſee, if and how the inferiour Metals, by true Art, may be tranſmuted into good and conſtant Gold and Silver: I find, that it is firſt neceſſary to declare whence, and by what means the Melioration of the imperfect Metals muſt proceed by Art, and by what means only by Nature, without the hand of the Artiſt, the clean and fixed Gold and Silver hath arrived to ſuch a Purity, and Perfection.

It being then, that this knowledge is the only Foundation, upon which *Alchymy* is built, I find it neceſſary to diſcover it to thoſe, who are ignorant of it, and to ſhew a ſure way, in which they may go without hinderance, and happily arrive to the deſired End.

The Reaſon, why Nature generates all Metals in the Mountains, and brings ſome of them to Perfection, and leaves others imperfect, ſeveral Philoſophers of our Anceſtors have very plainly deſcribed, and therefore needs not here to be repeated. He that knows it not may enquire after it, in the Writings of theſe Philoſophers, where he may learn their Grounds, or Reaſons, only this little I think neceſſary here to ſhew, *viz.* that all Metals and Minerals have but one Original, or beginning, to wit, the four Elements, Fire, Air, Earth and Water. But that one Metal in the Earth, in which is its Matrix, becomes to be more noble than another, this is but accidental, according as one Metal by the Central Fire is more, or leſs cocted, and chiefly from thence, according as the Univerſal Spirit of the World, or firſt Matter of Metals, lights of a Matrix in the Earth, more clean or unclean. But paſſing this by, becauſe the Books of Philoſophers are filled with them, although obſerved by a very ſmall number of Men. For almoſt all who read Chymical Books, read only to the end, that they may ſee thoſe Proceſſes, which teach how to make Gold and Silver out of the inferiour Metals, but do not at all mind the Original, and difference of Metals, although that ought to be the firſt, for where the Philoſophers write of the Generation and difference of Metals, there they publiſh the whole Ground of *Alchymy*: But where they write their *Receipts*, and *Proceſſes*, their they obſcure the Art, and lead the eaſie Believers into Errour. Among all the Philoſophers, I have found none which hath dealt more plainly and openly in this Matter, than *Paracelſus* in his *Heaven of Philoſophers*, who writes, that every Metal is an hider or concealer of the other Six, or that every viſible Metal contains in it ſelf inviſibly and ſpiritually the other ſix Metals, and that to bring forth and make viſible, the inviſible, and more noble Metal, and on the contrary, to tranſplant the viſible and ignobler Metal in the ſame place, where the more noble and inviſible was, is very poſſible, which is indeed the very Truth. For I my ſelf have perform'd this Tranſplantation, not only once, but ſome hundred times. If any hath a mind to perform any notable thing in *Alchymy*, he can find no Book, which will teach him more than the Book above cited. But yet I will not deſpiſe the Books of other good Writers. And if this were not true, that every viſible Metal hides in it ſelf the others, inviſibly, how could it be poſſible to tranſmute any inferiour Metal, either univerſally or particularly, into good and conſtant Gold? But that it is poſſible, daily ocular inſpection proves to be true, in ſeveral places of the World. Now if this be ſo, as no man needs to doubt it, it will not be difficult to teach any underſtanding Man, if he will but learn a little how to handle the Fire, how to bring forth fixed and corporeal Gold, out of thoſe groſs and viſible Metals, in which lyes hidden a great deal of pure and ſpiritual Gold. But yet you muſt know, that one clean Metal hath more inviſible and ſpiritual Gold in it, than another. *Jupiter* hath in it much ſpiritual Gold, but *Venus* more, and *Mars* the moſt: Yet *Antimony* doth not give place to *Mars*, for the quantity of ſpiritual Gold. Now whoſoever is minded to undertake this ſort of Labour with Profit, let him take care what Metal he handles, and how he handles it, that inſtead of Profit, he may not reap diſcouragement and damage, but may have reaſon to thank God, Nature and Art; in which, this following Proceſs will ſufficiently help him, in which, the true and moſt

moſt certain way is openly ſhewn. Yet with this Proviſo, that he ſo lives, that God may be pleaſed with his Converſation, and not have it in Abomination. For Gods bleſſing is all in all. There muſt be together earneſt Prayers, diligent Conſideration, and unwearied Labour, or elſe one may eaſily fail, although the Art be plainly and clearly ſet before his Eyes, without any reſerve, which a good Chriſtan ought certainly to believe. Yet I have often heard the contrary, from impious Men, ſuch are the adherents and Conſorts of *Farnner*, as if God had nothing to do with ſuch Arts, and that Art alone was Maſter in theſe Caſes, which certainly is very impious, ſeeing that ſuch Blaſphemies, take away from God his Omnipotency, his Goodneſs and Mercy, and give them only to Nature, ſeeing that God hath not his beginning from Nature, but Nature from God. Have not the wiſe Heathens believed, that God could give his bleſſing to Mens endeavours, and take it away again at his Pleaſure? What ſaith *Virgil*, that famous Philoſopher? when he teacheth how to pluck the Golden branch from the *Opake* Tree:

Tene manu, facileque ſequetur, & uno avulſo,
Non deficit alter, ſi te fata vocant, aliter nullis viribus
Nec duro ferro avellere potes.

One Branch being pluck'd and born away,
Another follows; unleſs the Fates ſay nay:
Without whoſe Smile, no force of hardeſt Steel
To crop the ſmalleſt Twig, can ought prevail.

It is ſaid, *Ora & Labora*, Pray and Labour, according to which, let every Man live. Now you ſhall hear how the imperfect Metals, in a particular way, may be tranſmuted with great Profit, into perfect, and that very plainly without any reſerve, for I have obtain'd it at length by much Conſideration. And becauſe my great Age, and ſeveral long Sickneſſes keep me continually in Bed, and both Feet are as in the Grave, where I ſtand certainly expecting nothing elſe, but a happy departure out of this tranſitory Life, into a better, which paſſeth not away. So that I would by no means intermit to ſing with the *Swan* before my end, a pleaſant Song which may rejoyce all the Lovers of *Alchymy*, if they will make themſelves ſharers of this Melody. For thoſe who read what I here write, and yet give no Credit to it, nor put their hand to the Work, and finiſh it with diligence, they will reap no Profit by this my inſtruction. But thoſe who underſtand my Writing, and work plainly after the Letter, provided they have but a little underſtanding in the Fire, will reap great Profit; yea, even great Riches by it. For I am plain without any reſerve, ſo that if any ſhould fail, the fault will not be mine, but muſt be imputed to the Workmans want of Skil; for I never in my Life ſought to gain any thing by my Writing, neither will I now do it, but it ſufficeth me if I do good to my Neighbour, out of Love, with that Talent which God hath given me. Whoſoever is on *Glauber*'s ſide, and will participate of my good intention, he may, or let it alone, 'tis all one to me, for they are not all good Cooks that wear long Knives; the Art conſiſteth in Experience, and he that is but any thing skilled in Chymical Operations will do well enough, for all is laid plainly down before his Eyes. But on the contrary, the Covetous, Proud, and Lazy who ſeek to be rich without labour and pains, will find every thing dark, and never attain to any thing profitable. For God will have it ſo, that not every Body ſhall be Rich, as *Paracelſus* very well expreſſeth it in his Book of *Sulphur*, when he ſaith, *Many might be helped with a few Words, if it was not againſt the Will of God, for God will not have the* Goats-*tail equal the* Cows *in length, for elſe out of Pride he might with it beat out his own Eyes, and therefore it is better to be ſilent, that they may remain Poor.* Thus *Paracelſus*. But I *Glauber* ſay, that it is better to lay down the Art in truth, without difference before all Men, for God keeps ſtill his hand over it, and to whom he Wills it, he will give it, and to whom he will not give it, he knoweth how to caſt a Miſt before his Eyes, that he may not ſee the good, nor have power to apprehend it, but may wander about in darkneſs, with his proud and dull Head, till at length he fall into the Pit of the impious, and there periſh without help. But that I may no longer detain the Lover of Art with my Diſcourſes, but come at length to the Practice, I will in the Name of God here ſet down the whole Proceſs as it is in it ſelf, without any Reſervation, and the whole buſineſs is thus.

Now followeth the true, and often practiſed Proceſs, how to tranſmute Silver (as being yet not a perfectly mature Metal) by degrees, without any loſs, totally into the higheſt perfection, that is to ſay, into good Gold abiding all Tryals. After the revealing of this Proceſs, we ſhall alſo hear, how all the imperfect Metals, *viz.* ♄, ♃, ♂, and ♀ may after the ſame manner (but yet not totally, but only ſo far as they contain an incombuſtible *Mercury*,) be tranſmuted into good Gold and Silver. And after this Revelation, we will not omit to ſhew alſo, which way ☿ the moſt immature of all the Metals, may be tranſmuted, not only Particularly, but alſo Univerſally, into the higheſt Medicine, and the beſt Gold. But the later muſt thus be underſtood, that we may not caſt Pearl before Swine, but that they may remain only among honeſt hearts, and not come into the hands of double-minded Men.

But now, to come to the Melioration of Silver, the ingenious muſt know, that Silver is naturally fixed in the Earth, and endures the Fire, and therefore needs no Art to fix it; for it bears the Tryal of the Teſt, as well as Gold, wanting only Colour and Weight, which Nature hath not beſtowed upon it, but may be procured by Art. As for the Colour, the ſecret Fire of the Wiſe can only make it perfect, for all Colours are abſconded in the common Fire of Wood, and the Sun, as we daily ſee, that the Univerſally ripening Sun, brings all the Fruits of the Earth, from a Green and White, by its conſtant Beams, to Redneſs and Maturity. And we alſo ſee, that the common Fire, of Wood and Coals, makes Earths and Minerals which are White, become Red, as we ſee *Crocus Martis*, *Minium*, and other Colours which are produced out of Black, Gray, and White Metals and Minerals; as the highly illuminated *Paracelſus* hath ſufficiently taught us, *viz.* that the common Fire of Coals, by its own power and innate Nature, without any addition of other things, is perfectly able to graduate the white Metals, into Red, or yellow Gold, as you may ſee in his *Book of Cements*. If the common Wood-fire of it ſelf doth this, what cannot the Fire of the wiſe effect, which was always kept in the greateſt Secrecy? Eſpecially, if one know how to add a graduating *Metallick* Species, as *Mars*, *Venus*, and *Antimony*, and the like, after a ſpiritual manner, to the ſecret Fire; which is the way to give to white Silver, a conſtant Redneſs.

As

As for the weight of Silver, it may, in like manner as the Colour be given to Silver by Art, ſo that it ſhall be equal with Gold in weight: Which introduction of Colour and weight into ☽, the Philoſophers have called cloſing of its Pores. For this is certain, that if any light Metals are melted together, that one filleth up the Pores of the other, and both come out of the Fire more compact and heavy, than they were before. For example: Take half an Ounce of Red Copper, and as much of good Tin, melt theſe together, and pour them out into a Bullet-mould, and you will ſee, that they will not be much more in Magnitude than one of them was before; for one Bullet of ♀ and one of ♃ may almoſt be put into the ſame Mould: From whence it appears, that one Metal hath an ingreſs into the other, and mends, and augments it in its weight and Colour; but what thoſe Metals are which give weight and colour to Silver, you may eaſily gueſs. Nothing can tinge, but what is naturally Coloured, and nothing can better give weight, than what is naturally heavy: In which, ♀ and ♄ have the Prehemineny, but in introducing Colour, *Mars*, *Venus*, and *Antimony* excel. But which way this introduction of colour and weight, into light and white Silver, is to be done, the following Proceſs will teach.

But this the Ingenious ought to know, that it is no Art at all, that if the Iron made Red, and ♀ and ♄ made White, be mixed with ☽, yet they will not render it durable, red and heavy: But the Corroding ♄ will quite take away the Redneſs and Whiteneſs upon the *Cupel*: For what is not purged from all combuſtible *Sulphur*, connot ſuſtain the *Cupel*, but will vaniſh with *Saturn*, and turn into *Scoriæ*: And ſeeing that we know, that ♂ and ☿ contain abundance of ſuperfluous combuſtible *Sulphur*, and alſo that their incombuſtible *Sulphur* is not yet fixed enough, to reſiſt the Corroding ♄ upon the *Cupel*, and therefore with him muſt vaniſh and come to nothing, for all that is able to abide the *Cupel* muſt be ſeparated from all combuſtible *Sulphur*. Now we know, that ♂ and ☿ are not ſo, and therefore cannot abide the *Cupel*. For ♂ if he be made Red, and caſt upon Silver, he doth not remain Red with it, but ſo much as enters the Silver, again becomes black Iron, and therefore can give no Colour to the Silver; and alſo ☿ flies away, and ſo leaves no weight to the Silver: Which *Paracelſus* hath ſufficiently deſcribed in his *Cœlum Philoſophorum*. So that if one melt unfixed Metals with Gold and Silver, and keep them together never ſo long in the Fire, yet notwithſtanding the unfixed Metals, cannot be made fixed by the Gold and Silver, but every of them would again be found in the *Examen*, as they were before. But if one Metal ſhould make the other better, they ought to be ſpiritually conjoyned, and ſo the Spirit of one Metal will improve the other. For all Philoſophers teſtifie, that the Metals muſt firſt be reduced to their firſt Matter, that is, they muſt be brought into a ſpiritual being, before they can be tranſmuted into more Noble, by Art. But which way all Metals are to be ſpiritualized, and brought to their firſt Matter, is taught in my Treatiſe of the *Three Principles of Metals*, lately publiſhed, as alſo in the Seventh part of my *Pharmacopæa Spagyrica*, and its Appendix. Now if one would Meliorate, or improve, the imperfect Metals, the imperfect combuſtible *Sulphur* muſt firſt be ſeparated from them, that only the pureſt and incombuſtible part, *viz.* the incombuſtible *Sulphur* may remain; which may be done by ſeveral ways; as by Diſtillation, and Rectification, and alſo by Aduſtion, and Combuſtion, in which nothing periſheth, but the combuſtible and unprofitable part: But the incombuſtible Oyl ſtill remains, and doth not periſh by the Fire; and alſo by Solutions, Diſtillations and Rectifications, all the unprofitable Feces of the Metals are ſeparated, and there remains only the clean Quinteſſence of the Metals, which are ſeparated and advanced into a concentrated Medicine. This Separation of the unprofitable and combuſtible *Sulphur*, from the incombuſtible, an Old Philoſopher hath notably expreſſed in theſe Verſes.

Eſt impoſſibile, Sulphur ſine Flamma delere,
Calcis aduſtibile, quod præſtat foſſa Mineræ.

Sulphur *impure, we can't blot out,*
Till Circling Flames play round about
Our Oars and Calces; for then they
This ſubtil Fire forthwith obey.

Here the Philoſopher tells us, that every combuſtible *Sulphur*, may be burnt, and reduced into nothing, but no otherwiſe, than by a kindled and combuſtible Fire, by whoſe Flame nothing that is good, but only the ſuperfluous and noxious *Sulphur* by which all the inferiour Metals are deſtroyed, is taken away. And therefore juſtly reputed imperfect, as long, and as often, until this unprofitable *Sulphur* is taken away from them, either Particularly, by Diſſolving and Coagulating, Diſtilling and Rectifing, or elſe by an Univerſal fixed *Mercury* by projection, by which means the hurtful combuſtible *Sulphur* is fixed, and, without Combuſtion, tranſmuted into a nobler Metal. For this is very poſſible, that any combuſtible *Sulphur*, by an eaſie way and ſmall Charge, and in a ſhort time, *viz.* in one day, Particularly, may be ſo fixed, and made conſtant in the Fire, that, without being burnt, it may be able to endure the ſtrongeſt Fire, the which is handled more at large, in my *Three Principles of Metals*. From hence it follows, that no imperfect Metal can be tranſmuted, with Profit, into a Perfect, before it be free'd from its combuſtible *Sulphur*, which may be done ſeveral ways. Now, he who hath a mind to get any good out of the imperfect Metals, muſt learn how to ſeparate their unprofitable *Sulphur*, either by one means or other, as I have ſufficiently taught. For in this, *viz.* in the Separation of the combuſtible *Sulphur*, from the incombuſtible, conſiſts the whole Art; which every one ought to attend without other thoughts. Now after we have underſtood out of this Theory, in what the Melioration of the Metals conſiſts, or how it muſt be effected, it is neceſſary to know the exact Practice, or Proceſs, as the Operations ſucceed one another: For to this work belongs, not only Diſtillation and Rectification, to ſeparate the pure from the impure, but alſo the moſt ſubtil and clean parts, after they are ſeparated from their Feces, muſt be made fixed, ſubtiler, and conſtant, *viz.* ſo conſtant, that the Corroding ♄, may not overcome them, but againſt his Will, leave them conſtant upon the *Cupel*. This is one of the greateſt Secrets in *Alchymy*, yet taken notice of but by few, and therefore few there are who reap any Profit. For the greateſt part of Operators are perſuaded, that if they had but Red Metallick Tinctures, that they could immediately tinge with them, but in the end they have underſtood, that more than unfixed Tinctures are required. It is an eaſie Matter, to make Red Tinctures out of Stones and Metals: But theſe are not permanent on the *Cupel*, without true Fixation, which the Philoſophers call Perpetuation in the Fire. Nothing in the

World can tinge, so that the tinged Metal can endure the *Cupel*, as long as the Tincture is still Metallick. For whatsoever is made out of Metals, and by a strong Fire may again be reduced into a Metal, cannot be called a true Tincture, for whatsoever yet contains a combustible *Sulphur*, perisheth upon the *Cupel* with *Saturn*, and nothing abides, but what is totally deprived of that. For even the *Saturn* contains much combustible *Sulphur*, therefore he so readily acts upon Sulphureous Metals, and draws them with himself into the *Cupel*, which he cannot do to Gold and Silver. But because we also know this, that when by the help of common fixed Gold, a combustible and fugacious *Sulphur* is well united and fixed, that the combustible *Sulphur* adheres so closely to the fixed Gold, that it also remains fixed with it, and can never be separated from it. Now, if the weight and proportion be well adjusted, then the fixed *Sulphur* enters with the Gold into Lune, and Tingeth it into constant Gold. But if the conjunction of the *Sulphur* and Gold, be not well made, or too much of the *Sulphur* be put to the Gold, it takes away the Ingress of the Gold, so that it remains with the *Saturn*, and cannot enter the Silver. It is also to be observed, that if the *Sulphur* of ♂, ♀ or ☿ be legitimately united with ☉, and yet be not kept long enough together, it will produce no good; and therefore the Transmutation of Metals is not so easie a thing, as many imagine; it is not enough to make a Tincture; to fix it, is more; and to give an Ingress, is hardest of all. And these three things ought to be well known, if one would effect any good in the Transmutation of Metals.

Now that we may farther hear, which way Tinctures may be drawn out of the Red Metals, fixed, and made constant in the Fire, and how to give them an Ingress, I have undertaken to Reveal to the Lovers of Art. And none needs to doubt, but what I here Write are my own Inventions, which I have not only once or twice, but many times experimented, and always found good, although in small quantities, provided no accident hath hindered me. If a Glass break in the labour, or a Crucible runs out, by which one suffers loss, that is not to be accounted a loss, because it comes by accident and not from the Art, and therefore not to be imputed to the Art. If an Art be never so well described, and an Unskilful Workman intermeddle with it, the Work may be easily spoiled, and therefore the fault cannot justly be charged upon the Art, as it is too often done. I shall here acquit my self of this unjust charge, if out of a good Intention I here discover the Art, as I have often done, without concealing any Manual Operation, and hereafter shall not care what Ill Men say or judge of it, if any one, through his want of Skill, should lose his labour. I here Write nothing, but what I have often done my self, and found good; for what should move me to publish any false thing, that might seduce others to labour in vain, even when I am ready to dye? I never sought any Profit by any of my Writings, no, not when I was young, and might have occasion for it. And now, when both my Feet are in a manner in the Grave, and I am certain not to live much longer, although I am heart-whole, nor find I any dolour about me, yet my Limbs being weak, I am forced to keep in my Bed, where I Write this. I say, Why should I, so near my end, write any thing hurtful to my Soul? I write this for my farewel, to do good to the World, even as the Swan, when she is near her death, sings a pleasant Song, and such I would that every one should take these my last Writings to be. But if it shall please God, I hope this will not be the last; which is only a small Work, to shew the probability and verity of the Transmutation of Metals, and to help Skilful Chymists to great Riches. But if God shall yet spare my Life, I shall write of higher matters, and shew such a light to the blind World, as hath not yet been revealed by any Man. In the mean time, I desire the Ingenious very well to consider this particular, and to try his Fortune, every thing is easie to be done, and needs no beating of the Brain, for all the labour is clearly laid down, without any reserve, therefore I would have none be so arrogant, as to impute the fault to me, if he miss his Intention, but rather to himself, through his own unskilfulness or negligence. Yet this is also to be considered, That sometimes a true skilful and diligent Operator cannot imitate an easie thing, being hindered by the Almighty, who for certain Reasons keeps his Hand over it, and will not let every Man grow Rich.

Now follows the Fundamental Process, how to make good Gold out of Silver, with profit, and how to separate, after a particular manner, good Gold and Silver, out of Iron, Copper, Tin and Lead.

℞. A pound of Steel Wier, more or less, according as you will begin your Work in a greater or lesser quantity, dissolve it in Spirit of Salt, filter the Dissolution, and abstract the Phlegm from the Solution, in Sand, for in the Abstraction there will come over no acidity, (because the *Mars* holds it after a Magnetick manner) but yet this is not without virtue, for it carries over with it self a very subtle Martial Spirit, of which a little put into ones Mouth, penetrates the Tongue, so that the taste thereof remains long after. And this penetrating taste and smell, is nothing else but the most subtle Narcotick *Sulphur* of *Mars*, which is set at liberty in the Solution, and carried over with the sweet Water, in the deflegming. It doth wonders in Internal Obstructions; and Externally it easeth all Pains, because it is Narcotick and Stupefactive; It serveth for Physicians and Chyrurgeons in many cases, but because I have already written of this, I need not here repeat it. And this you ought to note, that you draw not off the Phlegm to dryness, but the Solution of ♂ must remain in form of an Oyl. This sweet Oyl of ♂ is the *Opake Tree of Virgil*, from which he hath taught us to pluck its Golden Branches, and how this is to be done, he hath also obscurely hinted, but I here publish it plainly. *Virgil* saith, that those Golden Branches are the gift of *Proserpina*, but what was to be understood by this *Proserpina*, which the Heathens have said to be the Wife of *Pluto*, is not here expressed, but only this, that this Golden Branch was Consecrated to the Goddess *Juno*. He that will have the foundation of those Heathenish Gods, cannot better accomplish his Desire, than by Reading the last Edition of the Dictionary of Eight Languages, written by *Ambrosius Callepine*, for there he will find many curious secrets of the Ancient Poets illustrated. Now concerning *Proserpina*, many Philosophers and Chymists understand the Corrosive Oyl or Butter of *Antimony*, of which I have already made mention, although obscurely, in my Treatise *De Sale Philosophorum*, but shall here give it you more plainly. Now, if according to a due weight, you put some of this *Proserpina* to the Solution of *Mars*, and unite them well together, and then distil this mixture by a Glass Retort well Coated, there first comes over a certain unprofitable Humidity, then a white Oyl of *Antimony*, which

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is to be kept by it ſelf, and when you ſee yellow drops begin to fall, you muſt then change your Receiver, then give a ſtronger Fire, and the *Proſerpina* brings over with it ſelf the Tincture of *Mars*, as red as Blood. This Blood-red Oyl of *Mars* and *Antimony* is the Golden Branch, plucked from the obſcure Tree, which may eaſily be fixed into a particular Tincture, as we ſhall hear anon. Now when you have pulled one Golden Branch, you may alſo pluck a ſecond and third, for they will eaſily follow. As for the manner of plucking more ſuch Golden Branches, it is thus: You muſt diſſolve the remaining ♂ with Spirit of Salt, and there will remain many Feces, but the Solution will be clearer and better than the firſt, although leſs in quantity: Now, after (as I told you before) you have put to it the due quantity of Butter of *Antimony*, for which purpoſe that which came over in the firſt Diſtillation will well ſerve, and when you have driven this over by a Retort as before, the *Proſerpina* again brings over more of the Tincture in a Blood-red Oyl, which may as the firſt, be fixed into a Tincture. After this manner you may pluck many Branches, one after another, but it is not convenient, becauſe the Solution of *Mars* is diminiſhed by every Diſtillation, and at length your Branches would be very ſmall; therefore it is better when you have plucked the firſt Branch, to go to another Tree, and there to pluck a Golden Branch, for the Tree is not ſo precious, and you may collect the Trees from which you have pulled the Branches, and diſſolve them in Spirit of Salt, and then pluck from them more Branches. *Proſerpina* hath learned this ſpoiling and bearing away, of her Huſband *Pluto*, for he ſtole *Proſerpina* from her Parents, and carried her with him into Hell, and made her his Wife. *N. B. Pluto* carried *Proſerpina* into Hell, but *Proſerpina* doth the contrary, carrying the dead Bodies and Souls out of Hell. For ſhe hath her Original only from the Spirit and Salt of the World, which Spirit and Salt of the World have power to carry the Souls of the dead Bodies out of Hell, as you may ſee in the Books of Philoſophers which ſay.

Sal & Spiritus Mundi, ducunt Anima Mortuorum ex Orco.

The Salt and Spirit of the World, bring the Souls of the Dead out of Hell.

Let this ſuffice concerning the bringing over the Metallick Souls or Tinctures, which is done by *Proſerpina*. But there is yet other ways to draw out the Tinctures of Metals out of Red Bodies, and they are chiefly to be had by means of our ſecret *Sal Armoniack* in a far greater quantity, than by the help of *Proſerpina*, which is ſomewhat troubleſome, but yet theſe are more eaſily and perfectly acquired by our Alcaheſt. Now, after we have heard how to draw Tinctures out of Metals and Minerals by the help of *Proſerpina*, it is further neceſſary to know how to fix thoſe Volatile Tinctures, ſo that they may not only endure the ſtrongeſt Fire, to which they may eaſily be brought, but that is not enough, they muſt be made ſo fixed, that the Corroding *Saturn* may not have power to injure them upon the *Cupel*; if that be not done, theſe Tinctures can profit nothing to Metals. I have ſeen very many who very well know, how to Extract Tinctures out of *Mars*, *Venus*, *Vitriol* and *Antimony*, but they wanted the Fixation, the perpetuation upon the *Cupel*, and alſo Ingreſs, and therefore they could do nothing with them. Theſe following ancient Verſes are read by many, but underſtood by few, *viz.*

Fixum ſi ſolves, faciesque volare ſolutum
& volucrem figes, faciet te vivere tutum.

If thou diſſolve that which is fixed, and render it Volatile,
And again fix the Volatile, thou ſhalt not want.

We have proceeded according to this Verſe, in making the fixed Iron Volatile, although we have not yet again rendered the Volatile fixed and conſtant upon the *Cupel*. The Fixation requires but little Art, ſo that it may abide the Fire, but to make it abide the *Cupel* is a great Art, and cannot be done by idle talking, but by a fundamental knowledge, without which all is in vain.

Now concerning the Fixation of thoſe Volatile Tinctures, ſo as to abide the *Cupel*, I have (thanks to God) often experimented, and have already communicated to ſome who are Curious, out of kindneſs, whoſe ſucceſs I do not yet know. This Fixation cannot be effected without Common Gold, for when Gold in a liquid form according to a due proportion, is mixed and radically conjoyned with the Tincture, and caſt into Hell to *Pluto*, and *Pluto* finds his dear Conſort deeply in love with the *Anima* of *Mars*, or this Beautiful *Hermaphroditical* Youth, he burns with Jealouſie, ſo that he bends them ſo cloſe together, as they can never afterwards be parted by *Saturn*. But whereſoever one of theſe three goeth, draweth the other two with it. And becauſe they are alſo conſtantly together, as if it were one Spirit and Tincture united to the fixed Body of Gold, therefore they have an eaſie admittance into the Chamber of the Queen *Diana*; for *Diana* doth by no means ſhut out her deareſt King *Apollo*, but willingly admits him, and therefore ſhe is recompenſed with all the Treaſures which he hath received from his true and Warlike Servant, *Mars*: And of this, by *Neptunes* help, ſhe hath made her ſelf a glorious and conſtant Red Garment, which neither Water nor Fire, nor the old and envious *Saturn* can ſpoil her of. Here I have Fundamentally deſcribed the Fixation of the Martial and Antimonial Tincture, clearly without any reſervation, yet ſomewhat enigmatically, according to the manner of the Poets. He that doth but a little conſider, cannot fail, but muſt comprehend it, if he hath but a moderate Capacity, except God ſhall prohibite him.

Now let us further ſee, what may be further done with our Red Oyl of ♂, and ☿, in Phyſick and Alchymy. When we powr upon this Oyl our *Alcaheſt*, and again draw off the Liquor by a Retort with a gentle heat, and at length give a ſtronger Fire, the moſt ſubtle and cleaneſt part of the Tincture will come over, and the groſſeſt part will remain behind, which is an Univerſal Purge. The ſubtle part, may yet be made purer and nobler by Rectification, and this you may afterwards dulcify from its Salt, and dry the *Anima Martis* and *Antimonij*, then put it into a Glaſs, and with an eaſie Sand-Fire melt it into a Red Stone, for this Stone melts as eaſily as Wax, and hath as eaſie Ingreſs into all Metals, as Oyl hath into dry Leather. This Stone hath not its equal, for it is better than the Fire-Stone of *Baſilius*, it is better than *Butlers* Stone, to which *Helmont* hath aſcribed ſuch Wonders. Of this Stone and its incredible Virtues, which it ſhews in Phyſick, I ſhall treat at large in the following Treatiſe. This Treatiſe ſhall Diſcourſe of three

three unknown Fires, and Stones: Frſt of the ſecret Fire of the ancient Philoſophers, which is called the *Fire of Artephius*, by Virtue of which ſecret Fire, is generated the vegetable, Animal and Mineral ſtone of Philoſophers, and alſo particularly out of all Vegetables, Animals, and Minerals, their Quinteſſence, or higheſt Power, without the help of any common Fire, without Furnace, Glaſſes, or any other known Chymical Inſtruments, is to be obtained in a few hours, without any Labour or Coſt: And alſo things incredible and unheard of are by it brought to paſs; of which great Secret, no Philoſopher hath hitherto made the leaſt mention; as the before cited Treatiſe will ſufficiently teſtifie. The ſecond Fire is like to it, *viz.* the ſame with which the *Iſraelites* in old time did ſet Fire to their Sacrifices, which their Prieſts, when they were to go into the *Babyloniſh* Captivity, did hide in a dry hole in the Earth; and many years after, when they were releaſed from their Captivity, and returned, they found not a Fire, but inſtead of it a *Viſcous* water, which they poured upon their Sacrifice, and it kindled it, as well as if it had been done by the ſecret heavenly Fire, of which you may read more in the *Maccabeus*. This ſecret Fire of the Ancient *Caldeans* is alſo comparable to the *Æthereal* Fire, of which Meteors, Thunder and Lightning are generated, and alſo the Thunderbolts themſelves, which are caſt down upon the Earth, to the great aſtoniſhment of Mankind. *Hermes* hath very well ſaid, that what is above is alſo below, which is proved by the ſecret Fire of the *Caldeans*. For by a light, plain and cheap Art, one may eaſily produce the ſame Lightning fire, together with the Thunder, here upon Earth; of which the following Book ſhall treat more fully. And therefore to that I refer the Reader. I could not but here touch a little at theſe three Principal Fires, by which are generated the three chief Jewels of the World, that the Enquirer after the Wiſdom of God may know, what great Myſteries of God are to be imparted hereafter to the ungrateful World, before I publiſh this Book of Fires and Stones. Now to return to our particular, and ſee by what means our Red Oyl of *Mars* and *Antimony* may be Coagulated, after a nearer way, into a tinging Stone, with which Silver particularly, with all other inferiour Metals, may be Meliorated, that out of them may be had good Gold and Silver with profit. And alſo, how by it the Tinctures of Stones, both noble and ignoble, may be drawn out of them, and after the Tincture is drawn out, to incorporate it with Silver, and Colour it. And alſo, all precious Stones exalted in their natural Colour, and if their Colour be too high, it may be diminiſhed, and the Stone rendred more precious, and how this is to be done, the following Practice will reveal. The ſecond and eaſier way, how to bring our tinging Red Oyl of *Mars* and *Antimony* into an hard, ſweet, and not Corroſive Stone, is this.

In the foregoing Appendix, I have ſaid ſomewhat of the Coagulation of the ſharp Spirits, of Metals and Minerals, and have proved, that ſuch Coagulation is to be made by the help of Old, cold and dry *Saturn*, but becauſe I did not there declare, how it is to be effected, I think fit to do it here, and it is thus. All Liquors or moiſt things, if they are to be dryed, then the moiſture muſt be drawn off from the thicker part by an eaſie heat, and then the thicker part remains by it ſelf, and is uſed according to its Appropriation, as we know, that *Aloes*, *Myrrh*, *Opium*, and all other Gums and Juices were thin at the firſt, and were inſpiſſated into concrete Juices, by the Sun or Fire. It is true, ſuch an Inſpiſſation of vegetable Juices is eaſily done in this manner; but Mineral diſtilled Spirits, and Corroſive Oyls, cannot be thus dryed, for they will endure heat, but if you give too great a heat, they will fly away and not be thickned, as you may ſee in Oyl of *Vitriol*, which by it ſelf can never be dryed, although it be never ſo long kept in heat. But if you will have it dry, you muſt add ſomething to it which is more than dry, and hath alſo power to exſiccate moiſture. We ſee in the baking of Bread, when we put water to the Flour, and mix them together to make Dough, and of that bake Bread, that the Flour, although it be dry, yet it cannot retain with it ſelf the Water, in a hot Oven, for that perfectly flies away from the Meal by the heat, and if the Fire be encreaſed, all the moiſture would be gone, and only the Meal remain in form of a dry Earth, having quite loſt the form of Bread, becauſe the Meal was not radically united with the water, and therefore they could not endure the heat together. If one take a dry Earth, Sand or Powder of a Stone, and put water to it, the dry Earth will imbibe the water, and to the Eye reduce it into Earth, but this is not conſtant. For if you diſtil this Earth by a Retort, all the added water will again come over, and leave the Earth alone, but this is to be underſtood of common water. But ſuppoſe, one ſhould add a heavy Mineral water as *ol. Vitrioli* to a dry Earth, and ſhould commit this mixture to the Fire, in hopes, that the dry Earth ſhould retain with it ſelf the Corroſive Oyl of *Vitriol*, and alſo reduce it into a dry Earth, it would prove a miſtake, for the Oyl of *Vitriol*, in a ſufficient heat, would wholly forſake the Earth, becauſe the Earth is dead, and hath no Sympathetick, or Magnetick power, to conjoyn it ſelf radically with the Oyl of *Vitriol*, ſo as to remain together conſtant in the Fire; but ſuch an Earth, which by an innate Love draws the Oyl of *Vitriol* to it ſelf, and endures with it in heat, or cold without Separation, muſt proceed from the ſame Original with it, for every thing loves its like, and hateth what is unlike to it. Now, becauſe the Oyl of *Vitriol* proceeds from a Mineral kind, therefore it loves the Metals, but no common Earth or Stones, for it hath no affinity with them. Now if the Oyl of *Vitriol* be to be converted into an hard Mineral ſtone, it muſt be done by its like, to wit, by Metals, and by ſuch Metals as are moſt nearly related to it, *viz.* the Metals that are yet imperfect, for all Metals and Minerals proceed from the ſame Root, and therefore they all love one another, yet one Metal loves Oyl of *Vitriol* more than another, and the immature Metals, better than the ripe ones. For although Gold and Silver alſo love Oyl of *Vitriol*, yet they do it by Compulſion, and not out of true Love, for they are very difficultly diſſolv'd by it, becauſe they have put off their vitriolick Nature in their Fixation: On the contrary, *Mars* and *Venus* have not yet ſo done, and therefore they eaſily aſſume the Oyl of *Vitriol*, and are diſſolved by it, becauſe it was driven out of their Body by the force of Fire, therefore one might ſay, that *Mars* and *Venus* were the true Metals, and eaſieſt to Coagulate the Oyl of *Vitriol* and *Antimony*, and to fix them into a Stone, yet this is not ſo, for *Mars* and *Venus* are of a groſs Nature, and have too much unprofitable Earth, which may eaſily be ſeen by their difficult melting in the Fire. Then what is to be done? Shall *Saturn* or *Jupiter* do it, both which are of an eaſie Fuſion? Or, ſhall *Mercury* do it, which is always Liquid? I anſwer, that *Mercury* cannot Coagulate, nor

make

make fixed, becauſe he himſelf is not fixed, nor Coagulated. Neither can *Jupiter* do it, for although he is fluxible and dry, yet he is eaſily tranſmutable by a ſmall Fire, into an influxible Earth, which cannot again be reduced into a fluxible *Metallick* Body: What then, ſhall deſpiſed *Saturn* do it, (may one ask) who is unfixed himſelf? and which way is it then poſſible for him to fix a Body, which is more fluid than himſelf? To this I anſwer, that the Fixity is not the only cauſe of the Coagulation of the Oyl of *Vitriol*, for then this Coagulation might be eaſieſt performed, by Gold and Silver, which, yet is not done, and therefore this Coagulation of Corroſive Spirits muſt be done by dry *Metallick* Subjects. Now we know very well, that among all the Metals *Saturn* is the drieſt; of which *Paracelſus* writes very well in his Book of Vexations, which I have already alledged, and confirmed in the foregoing Appendix, [viz *Pharmacopæa Spagyr. Pars* 7.] It is alſo true, that a better Coagulator, of all Corroſive Mineral Spirits cannot be found, than old, cold, and dry *Saturn*; for by his great dryneſs he Coagulateth the moiſt Mineral Spirits; by his great innate ſweetneſs, he dulcifies all Corroſives; and by his fluxible *Sulphur*, he renders all influxible *Metallick* Subjects, fluxible. Now we need nothing more to our Red Oyl of *Vitriol*, *Mars* and *Antimony*, but that it be Coagulated into a hard, ſweet and fuſile Stone, which Coagulation can only be done by *Saturn*, and by no other Metal or Mineral, which I have ſufficiently proved in the before mention'd Appendix, and alſo in my Book of the *Three Principles of Metals*. Now we have ſufficiently underſtood, that the Coagulation and Dulcification of our Red Corroſive Oyl of ♂ and ♄ into a fuſile Red Stone, can only be done by the help of the Old, Cold, and, of all Fools, deſpiſed *Saturn*. Concerning the Nature and Property of *Saturn*, it would not be here amiſs, to ſay ſomewhat of it: But becauſe *Paracelſus* hath already ſufficiently done it, in his *Cælum Philoſophorum*, and I have already confirmed it in the forementioned Appendix, I think it here unceceſſary to add any more. Yet I cannot forbear to ſay this, that *Saturn* naturally contains yet a good quantity of the Corroſive Oyl of *Vitriol*, which doth not vaniſh in melting, nor cannot be eaſier perceived, than when other Metals are added to him upon the *Cupel*, how ſoon he ſwallows them, and draws them with himſelf into the *Cupel*, except Gold and Silver, which he cannot touch, becauſe they have no radical Communion with him, but are cleanſed by Nature from their ſuperfluous *Sulphur*, for this devouring Wolf *Saturn*, can conſume nothing, but the combuſtible *Sulphur* of Metals, but the incombuſtible fixed *Sulphur* and *Mercury*, he cannot touch, as appears in Gold and Silver. The ancient Philoſophers painted *Saturn*, as an Old Man, with one foot on a Wooden ſtilt, having in one hand a Sythe or Sickle, and in his other hand a Child, which he puts to his mouth to devour it. By this they would intimate the devouring Nature of *Saturn*, which they have alſo expreſſed in theſe Words, *Falx ejus Mordax eſt*, he hath a ſharp Sickle, beware of him, for he hath no mercy, which I have found to be true, not only by the *Cupel*, that he Corrodes and eats through them, for he Corrodes Sand and Stones, and reduceth them into a tranſparent Glaſs; if he doth this by his own Nature, what will he not do, when his Sythe is whetted by the Corroſive Oyl of *Vitriol*? Certainly he can do ten times more: I have experimented it, he that will know it, may alſo do the ſame: By him we waſh and cleanſe common Gold and Silver on the *Cupel*, but that Gold and Silver, which is ſtill hid in the imperfect Metals, as *Mars*, *Venus*, and *Jupiter*, as alſo in the vile Minerals and Stones, which is ſtill cloſely tyed to the combuſtible *Sulphur*, here the common *Saturn* is too weak and can make no Separation. On the contrary, ours can effect it very well, and therefore I commend him, for after his Sythe is whetted by the Corroſive Oyl of *Vitriol*, if then one handle any Metal, or Mineral with him in a Crucible, he will in a moment eat a hole through it, and run out; Nay, if one ſhould put two or three Crucibles one into another, he would do the ſame, but if one caſt ſomewhat before him, to ſatiate his Wolf-like Appetite, then he leaves the Crucibles whole, but doth what the Artiſt would have him, and is uſed as a tame Wolf, devours the Sheep no more, but keeps them from other devouring Wolves.

Before I could bring him to that paſs, to prevent his biting, I tryed many ſorts of Veſſels to hold him, nay I have put him upon a Teſt made of bone Aſhes. 'Tis true, he did not eat in, but remained fixt upon the *Cupel* like Silver, and would not Coppel, by which I perceived, that any common Lead, by help of the Red Oyl of *Mars* and *Antimony*, may in a very ſhort time, not only be reduced into Gold and Silver, but alſo be fixed into a true Tincture, which I have ſufficiently ſhewn in the foregoing Appendix, that ſome of the ancient Philoſophers have made their tinging Stone out of *Saturn*. But ſetting this aſide, becauſe I yet never went ſo far, but I ſhould not think it at all difficult, to make an univerſal Tincture, to tranſmute all the Metals into perfect Gold and Silver out of *Saturn*, with the Red Oyl of ♂ and ♄, if my weakneſs of Body would permit. But I concern not my ſelf about that, but leave it to thoſe that are younger, for I can eaſier come to an univerſal Tincture, by the help of the ſecret Fire of Philophers, than by *Saturn*; but in the particular Tranſmutation of Metals, I have performed many things with the Stone of ♄, as the following Practice ſheweth.

Now followeth the eaſie Coagulation of our Red Oyl of Mars *and* Antimony, *into a Red, Sweet, and fluxible Stone.*

℞. Some Pounds of common Lead, melt it, and pour it out into a long Ingot, and raſp as much thereof as need ſhall require; take of this a Pound or more, and put it into a Glaſs Retort well coated, pour to it half the quantity of the Red Oyl of ♂ and ♄, ſet it in a Sand *Cupel*, and give Fire gently by degrees, and there will come over no Red Oyl, but only a clear and inſipid Water, and all the ſharpneſs, with the Red Tincture, will remain with the ♄. If you break the Retort, you will find no *Saturn*, but this Red, Tinging, and eaſie melting Stone, of ſuch Virtues as I have told you before. Now if you will make uſe of this Stone for the particular Meliorating of the inferiour Metals, as alſo for noble and ignoble Stones, you muſt powder it, and mix it with the *Metallick* Aſhes, and melt them, and you will find the good Metal to be ſeparated from the reſt, the unprofitable part, and ſuperfluous *Sulphur*, will turn into droſs, and the purer part will ſettle into a *Regulus*, which you muſt blow off upon a Cupple, and you will find the Silver and Gold, which our Stone hath ſeparated out of that Metal; for our Stone hath this Nature, to ſeparate in the Fire the good from the bad, to turn the Good into a Metalline *Regulus*, and the inferiour into Droſs. For Example, I have a mix-

ture of Metals containing Gold, Silver, *Venus*, *Mars* and *Jupiter* together, I granulate this mixture, and mix them with our Stone, melt them together in a Crucible, our Stone only ſpoils the inferiour Metals, as ♂, ♀ and ♃, which it conſumes into a Droſs, but the purer as ☉ and ☽ it ſeparates from this Droſs, and precipitates them into a *Regulus*. But if this *Regulus* ſhould not be fine enough at the firſt melting, you muſt *Cupel* it with Lead, neither doth all the ☉ and ☽ come out of this mixture at one melting, but ſome remains with the Droſs, therefore you muſt again put this into a Crucible, and put to it ſome filings of Iron, and ſo melt them together, then the wild *Sulphur* will be deſtroy'd by the ♂, and ſo let the Gold and Silver fall by Cupellation. The Droſs you muſt reſerve, till you have enough to melt in a ſmall Wind Furnace, and it will be again reduced into Lead, which you may again uſe for the ſame Labour; for the Reduction of this, I have invented a peculiar ſmall Furnace, which may be carried from place to place, and alſo you may pour out the Droſs after it is melted, without breaking any thing of the Furnace, ſo that you may uſe it very often, before the Hearth will need mending. What is here ſaid of the Separating of *Metallick* mixtures, the ſame may alſo be underſtood of thoſe Mixtures, which are yet in the Oar, for the Oars are as eaſily ſeparated by our Stone, as the Metals. This is the uſe of our Stone, before its Tincture is yet fixed, and therefore not able to tranſmute ☽ into ☉. Preſently you ſhall alſo hear, how it may be rendred capable to tranſmute any Silver, by Degrees, into good Gold. I think it fit, firſt to ſay ſomewhat, how by the help of our Stone one may attain great Profit from Gems. For the Gems have in them fixed Tinctures, which our *Neptune* can ſpoil them off, and ſo incorporate them with the naked *Diana*, to make her a Golden Veſt, which is done thus: ℞ The fragments of coloured Gems, *viz.* of Granates, Rubies, Saphirs, Hyacinths, Jaſpis, *&c.* put a little of theſe into a good Crucible, and put to it three times as much of our Stone, cover it well, and melt it upon thoſe Stones, and our Stone draws out the Colour of the Gems, and Colours it ſelf yet deeper. With this Red Stone, if any filed ☽ be mixed with it, and melted, it draws the fixed Tincture to it and becomes Golden, ſo that in the Separation it yeilds much Gold, *N. B.* The fitteſt Silver for this work is, that which is precipitated by ♀ out of *Aqua Fortis*, yet you may alſo uſe that, which is precipitated by Salt-water. If the work be well done, the Gems will be white, which you may uſe inſtead of ſmall Diamonds, for the Fire doth not take away their hardneſs, *N. B.* If a Man hath Skill enough to take away the Colour from the great Gems, as Granates, and Hyacinths, he may acquire Riches in a ſhort time; for afterwards you may tinge other white Stones into Rubies, by the help of this Colour, but this Labour requires an experienced Artiſt, but no Pratler: And this is ſufficient for this time, he that delighteth in theſe Arts may Practiſe them, and try how God will proſper him in it. If he can but obtain the Extraction of the Gems, he needs no more, for one Gem, of a Dram, is worth more than ſeveral Ounces of Gold. After we have briefly underſtood, how to make good Profit with our Red coagulated Oyl of *Antimony* and *Mars*, before it is yet fixed, with the imperfect Metals and Gems: You ſhall alſo hear what it will do, when fixed. And this you muſt know, that if a Tincture very well prepared, can endure melting in the Fire, yet for all that, it may not be accounted fixed; for inaſmuch as they are made out of unfixed Metals, they cannot themſelves be fixed; if one ſhould object, and ſay, that the Tincture was drawn out of fixed Iron, and therefore it muſt alſo be fixed, although the *Antimony* was not fixed: I anſwer, that Iron cannot be called fixed, although it doth not fly in the Fire, for *Saturn* can ſtill devour it, but this only is to be reputed fixed, which endures the *Cupel*, which neither ♂ nor ♄ doth. Therefore the Tinctures which are extracted out of them, cannot endure the *Cupel* before they are made fixed. For which reaſon the highly experienced Philoſopher *Paracelſus* tells us, that we muſt not take common Iron to draw our Tincture, but ſuch as cannot be again reduced into Iron, which we muſt ſeek in the green and blue *Scoriæ*, out of which Iron hath been melted by the ſtrength of Fire, and are caſt away. Becauſe the Iron, and alſo every imperfect Metal, containeth two ſorts of *Sulphur*, *viz.* a combuſtible, and incombuſtible; the combuſtible is melted by a ſtrong Fire, into a dead Glaſs, but the incombuſtible remains unhurt, hidden in the ſaid Glaſs, and may be drawn out of it by Art, and brought into a Tincture, that will endure the *Cupel*. I could cite *Paracelſus* for ſeveral other things, becauſe he writes very honeſtly, but it is not here convenient. It would be very well, if ſome one would reprint this Treatiſe, for it is out of Print, that the way to the Truth might be ſhewn to them that err. And if none will do it, I ſhall do it my ſelf, for it is commendable to preſerve a lighted Candle, and not ſuffer it to go out. This is enough of the Fixation of *Paracelſus*, which is done by the great ſtrength of common Fire. Now we will alſo hear, how this Fixation may be effected by an artificial moiſt Fire, much eaſier than by the former. In my Treatiſe lately publiſhed of the *Three Principles of Metals*, I have taught how any combuſtible *Sulphur* may be fixed in a very few hours, ſo that no Fire can any more hurt it. Now if ſuch a quick Fixation of combuſtible *Sulphur*, can be done with a moiſt Fire, as I have ſhewn it may in the ſaid Treatiſe, what may not be done, by the ſame Fire in the more fixed Metals, ſuch as Iron? I have alſo ſhewn in the ſame place, that ♄, as well as common ♃, may be made fixed in few hours, I have alſo ſaid that ♄ and common ♃, ſo fixed have no ingreſs into Metals. After that, I have alſo taught, how to procure this ingreſs by common Gold, if the Gold and the *Sulphur* be united, and then a a fixing *Aqua Fortis* drawn from them, that then it can never be ſeparated from the Gold, but that the Gold ſo preſerves it upon the *Cupel*, that *Saturn* cannot enter it: Now if this may be done with common *Sulphur* and *Antimony*, why not alſo with *Mars*, which in its Nature approacheth Fixity? Therefore it behoveth, that we ſhould fix our Tincture of ♂ and ♄, after the ſame manner being united with ☉, by the Humid fire, that both may be permanent upon the *Cupel*. For without this Fixation nothing of moment can be done. For if theſe Tinctures be added to Silver, and are not conſtant in the Fire, they with the Silver, become Metals again, vaniſh upon the *Cupel* with ♄, and leave the ☽ nothing bettered. Therefore nothing elſe is to be obſerved, but to bring into Perpetuation the prepared Tinctures of ♂ and ♄, by the addition of Gold, and the due Abſtraction of the fixing Waters; and then the Tinctures remain with the Silver unſeparable, and the devouring *Saturn* cannot hurt them upon the *Cupel*. Let this ſuffice concerning the particular Fixation of our Red Oyl of ♂ and *Antimony*. Now followeth, how to make an univerſal Coagulation and Fixation of this Oyl. *The*

The PROCESS.

℞. THree or four Ounces of our Coagulated Oyl of *Mars* and *Antimony*, into a Red Stone by the help of ☿, grinde it into an impalpable Powder, and draw from it ten or twelve Ounces of ſtrong *Aqua Fortis*, which hath been firſt abſtracted from decrepitated Salt, and in which is diſſolved half an Ounce of Gold: Secondly, and Thirdly, abſtract from it again freſh *Aqua Regia*, but without Gold; then the Gold will radically unite it ſelf with the Tincture of *Mars* and *Antimony*, and they will be conſtantly fixed together, by means of *Aqua Regia*. When this is done, pour upon it a good quantity of common Water, let it boyl for ſome hours, and it will draw out the ſharp Spirits, which remained with the Tincture, this may be once or twice repeated, then dry it, and it is fit to tinge Silver into Gold. This Tincture melts as eaſily as Wax; the *Saturn* which is mixed with it, doth not hinder it, it is true, he goes into the Silver with the Tincture, but is eaſily ſeparated by the *Cupel*. I could ſet down many more Dexterities, in the Preparation of this Tincture, but it would ſwell too much, it being already greater than I expected, for I only thought to have annexed this to the Appendix, as a Corollary, but it is grown bigger than the Appendix it ſelf. Here ſhould have been added, how this Tincture of *Antimony* and *Mars*, by the help of our *Alcaheſt*, might be made into a conſtant Tincture, eaſily and in great quantity, without Coſt; ſo compendiouſly, that in three or four days time, a good quantity of Tincture may be made fit to graduate a great part of Silver into Gold: But the time will not allow me here to inſiſt any farther on it, but muſt defer it the ſecond Appendix, where the Reader will find greater Contentment. For this work is ſo eaſily done with the *Alcaheſt* without great Coſt, that the moſt ordinary *Mechanick* may imitate it, and profit by it. There will come another World, when Art will flouriſh, and Pratlers periſh. Take notice of this, for the time is at hand, *Elias* the *Artiſt* will ſoon appear, of this Read *Paracelſus* in his Book of *Vitriol*. At ſuch a time there will be great changes in *Europe*, and chiefly in the *German Empire*, *France* and *Swedland*. For *Elias* the *Artiſt*, it may be, when he comes, will bring with him ſome Military inventions, and by his great Power eſtabliſh the Fifth Monarchy. That in theſe times great Changes will be in *Europe*, is not to be doubted, for the Heavens do foretel it. God ſend us what is good, there being now nothing of good left, how then is it poſſible, it ſhould remain longer in Peace?

OF ELIAS the ARTIST:

OR,

What we are to underſtand by Elias the Artiſt, and what he is to reform in the World at his coming.

VIZ.

The true Spagyrical Medicin of the Ancient Egyptian *Philoſophers, which has been loſt for above* 1000 *Years, and will be reſtored by him, and illuſtrated with many new Inventions, by rejecting much unprofitable Smut-work, and pointing out a nearer and better way to obtain good Medicines, with little Trouble or Charges; which true Medicine he will bring along with him, and declare the ſame to the preſent deceived World. Tranſlated out of the* High-Dutch.

Courteous Reader,

TOwards the end of my laſt publiſhed Treatiſe concerning the Infernal *Goddeſs Proſerpina*, I took occaſion to mention, that probably ſoon after my Death, the long-ſince fore-told *Elias Artiſta* would appear, and bring along with him a great Light, to enlighten the dark World, enabling them to reject the Evil, and embrace that which is good: As likewiſe, that many great changes will happen in divers Kingdoms, and eſpecially in the *Roman* Empire, where one Potentate will overcome the other, and make himſelf Maſter of his Dominions. I there alſo ſhewed what, *Paracelſus* hath declared concerning *Elias Artiſta*, and fundamentally confuted the groundleſs Opinion of ſome Perſons concerning the ſame in my Fourth Part of the *Proſperity of Germany*, ſhewing that that Prophecy

phecy is not to be underſtood according to the Letter, and to be meant of ſome great Man in the World, but Magically; for the word *Elias* by tranſpoſition of Letters, makes out *Salia*, and ſo likewiſe doth the word *Eliſha*, as I have formerly explained theſe words in my Treatiſe *of the Nature of Salts*. *Elias Artiſta* therefore according to the ſtyle of Philoſophers, ſignifies extraordinary and unknown Salts, by which great and incredible things may be performed, and accordingly when manifeſted, will be the cauſe of great changes in the World.

Theſe Salts were known to the Philoſophers of old, who yet did not think fit any further to open themſelves concerning them, than in declaring, that the Philoſophers Stone muſt be prepared by them. *Turba Philoſophorum* ſpeaking concerning this matter, ſaith, *This our Salt encreaſes the Redneſs in* ☉, *and whiteneſs in* ☽, and further, *if God had not created this* Salt *it were impoſſible to make the Elixir*. It is probable, that the Philoſophers who wrote concerning this wonderful *Salt*, had no knowledge of any other, ſuppoſing that this *Salt* only was proper to extract and prepare Tinctures. I muſt acknowledge there is no *Salt* in the World, that hath ſuch virtue to encreaſe and exalt the Tincture in common as well as Philoſophical ☉ and ☽, and that as it were in a moment, as ſoon as the Monarch of *Salts* is added to them. Neither doth our *Salt* only exalt, but it alſo joyns the King of Metals ſo indiſſolubly with his Queen, that no Art can ſeparate them. A thing worth our wonder, that a Volatile white *Salt* ſhould have the power to meliorate ☉ and ☽, and to exalt the ſame permanently. For to give ſome further light to the matter, I declare, that this *Salt* of which the *Turba* ſpeaks, doth ſublime white, and being diſſolved in Water, gives a white Solution: It is white, and continues white both in and out of the Fire, and is altogether Volatile, for which reaſon I have called it my *Secret Salt Armoniack*; but as ſoon as it is join'd with ☉ or ☽ it becomes fix, and makes the ☉ and ☽ fixer than they were before, affording them a kind of *pluſquam* perfection, and inſeparable Conjunction. Let none think that this *Salt* of which I here ſpeak, is like, or the ſame with that, which is made of Oyl of Vitriol and Spirit of Urine, of which I have treated in the Seventh Part of my *Pharmacopæa Spagyrica*; for this our Sovereign *Salt* has no affinity with that, for as much as that *Salt* makes all things Volatile, and ſeparates their purer part by Sublimation from the groſs *fæces*; but this our white *Salt*, though it be unfixt it ſelf, yet has the power to fix unfixt Metals, ſo as to endure the Teſt, provided always that the virtue of this unfixt *Salt*, be firſt fixed by its conjunction with ☉ and ☽. For the whole ſubſtance of this *Salt* (which the Philoſophers have called a Biſhop or High Prieſt) when ☉ and ☽ as King and Queen are inſeparably join'd by it, doth not abide with the ☉ and ☽, but only by its hidden Tincture and Virtue, whereby it exalts all colours, the unprofitable body of the *Salt* ſeparating from them, as ſoon as the Conjunction is made, even as a Prieſt, when he has join'd two Perſons in Wedlock goes his way, having performed his Office. And indeed this inſeparable Conjunction of ☉ and ☽, may well be compared with the Conjunction in Marriage performed by a Prieſt; for as when the Prieſt has join'd two Parties together in Wedlock, they muſt inſeparably continue ſo till death; ſo likewiſe when the Metallick Copulation of ☉ and ☽ is performed by means of our Metallick High Prieſt, conſecrated by *Jupiter*, then are their Bodies thence forward inſeperable; the Water finds no ingreſs into them, the Air cannot pierce them, and Earth much leſs, yea, the ſtrongeſt of all Elements, the Fire hath no power over them, but, like a Married Couple, abide together in all contrariety and adverſity, and according to their Kind do multiply *in infinitum*, being ſupported with due Food and Nouriſhment; for we know, that except we be refreſhed and ſtrengthened with Meat and Drink, we can neither live nor multiply; the multiplying virtue in many and all Creatures proceeding from the Nouriſhment they take in. And the ſame we are to underſtand alſo concerning the Metallick Multiplication, for when ☉ and ☽ are permanently conjoined, by means of the Metallick High Prieſt, this alone is not ſufficient in order to their multiplication, but they moreover muſt be ſupported with convenient Meat aud Drink. And as Man at his firſt coming into the World is nouriſh'd with his Mothers Milk, in like manner the Philoſophers do feed their ☉ and ☽ with their Mothers Milk, that is, with their firſt Eſſence, from whence they deriv'd their Original. Now we know that in contemptible *Antimony*, the firſt *Ens* of ☉, is copiouſly to be found, and may with eaſe be drawn thence, in the appearance of Milk, with which ☉ and ☽ are to be nouriſhed in order to their Multiplication and Increaſe. The Nouriſhment then wherewith our conjoined ☉ and ☽ are to be refreſhed, and diſpoſed to a Multiplication *in infinitum*, is our *Lac Virginis*, Virgin Milk and Mercurial Water, which ſtrengthens and increaſeth the Procreative Seed in ☉ and ☽ both in quantity and quality. Wherefore alſo this feeding or incération has always been recommended by the Philoſophers, as a moſt neceſſary thing, whereby, as it were, a new life, and multiplying virtue is communicated to the inſeparably united ☉ and ☽.

Furthermore we are to know, that after common ☉ and ☽ by means of the *Salt* of Art, are inſeparably conjoined and exalted in their colours; yet nothing can be performed with them, becauſe they want an ingreſs into other Metals, which they have loſt by their Conjunction, which therefore muſt be reſtored to them by means of our mercurial Water, which not only communicates Ingreſs, but alſo eaſie Fluxibility and Multiplication to the deſtroyed Bodies of ☉ and ☽. For when our ☿ Water is fixed in Conjunction with the fixt ☉ and ☽, then it is no longer a Volatile ☿, but is changed by the exalted ☉ and ☽ to a fixt Tincture. This done, if we would multiply this Tincture, we muſt add to it ſome of our *Mercurial* Water, and fix them together as before, which Multiplication we may repeat as oft as we pleaſe. For when once ☉ and ☽ are made irreducible and more than perfect, by means of our *Salt* of Art, we need never after to begin our Work a-new, but only mingle the fixt with the volatile in order to their Fixation; ſeeing that our *Mercurial* Water is in its inſide better than ☉, for which reaſon alſo it turns the ☉ and ☽ when fixed with them into mere Tincture. Let no Man wonder why in this Operation we join ☉ and ☽ together, and not rather make uſe of ☉ alone, foraſmuch as this ☽ hath no colour at all outwardly, though in its inſide it be higher of colour than ☉ it ſelf, both which Metals nevertheleſs, except their colours be exalted by the *Salt* of Art, and Inceration, without our *Mercurial* Water can never be changed into a true Tincture, becauſe ☉ and ☽ have no more Tinctures than is ſufficient for themſelves, but being exalted by the tinging *Salt* of Art, they are capable of colouring white Metals, but not before. Indeed ☉ alone without the addition of ☽ may be exalted by our *Salt* of Art, and *Mercurial* Water

ter into a Red Tincture. In like manner alſo may ☽ alone be exalted in its whiteneſs by our *Salt* of Art, and ☿, one part of which exalted ☽ tingeth many parts of ♀ into good and fixt ☽, for our ☿ wherewith we incerate and multiply, may be fixed into a Red or White Tincture, according to the ferment we joyn with it, with ☉ it makes a red, and with ☽ a white Tincture. However the beſt way is to put ☉ and ☽ together in due weight and proportion, exalting them with the *Salt* of Art, by which means the whiteneſs in ☽ when join'd with ☉, becomes changed into Redneſs, of which mine Eyes are Witneſs. Of this Exaltation of ☉ into a high purple colour, and of ☽ into the higheſt whiteneſs, I gave an Ocular Demonſtration to ſome of my Friends, before my Sickneſs, but none of them have ſince undertaken the Work, and my ſelf by Sickneſs have been hindered hitherto.

Ovid excellently deſcribes the preparation of this Tincture, where he tells us, that *Jupiter*, having chang'd himſelf into a Golden Rain, fell through the Tiles into the Lap of *Danaë*, (ſhut up by her Father *Acriſius* King of the *Argives* in a ſtrong Tower) and got her with Child, of whom afterwards *Perſeus* was born, who in proceſs of time being mounted on the Winged Horſe *Pegaſus*, killed the Sea-Monſter, delivering the fair *Andromeda*, whom he took to Wife; and afterwards vanquiſhed the *Gorgons*, and made himſelf Maſter of the Golden-fruit-bearing-Orchard. In which Fable the whole Work is clearly and punctually deſcribed, but the reaſon why it is ſo little underſtood, is, becauſe ſo few makes it their buſineſs to conſider thereof, or put their hands to the Work. For attentively conſidering the matter, we find that the King of the *Argives*, in the ſenſe of the Philoſophers, is our Black Lead, whence we prepare our Snow-white *Virgin Milk*, or Mercurial Water, which is the Beautiful *Danaë*, that becomes inpregnate by *Jupiter*'s Golden Rain. *Archivum* ſignifies a Treaſury of ſecret and important Records, and no Subjects contains more ſecrets, than doth our Black *Magneſia*. What is more lovely to behold than *Jupiter*'s Golden Rain, whereby the fair *Danaë* becomes impregnate? And from whence does this Rain proceed, but from our *Salt* of Art, without which it were impoſſible for ♃ to change the ☉ into ſuch a deſirable Rain? What is the Beautiful *Andromeda* elſe, but *Diana* the Conſort of *Apollo*, who is expoſed to the Sea-Monſter to be devoured, and is delivered by *Perſeus*. And, in a word, the whole Work of preparing a Tincture from the foreſaid Subjects is ſo clearly ſet down by *Ovid*, as it could not well be ſet down more clearly; and yet how little is it underſtood, by reaſon of the general Stupidity and inadvertency of the Readers. I have here diſcovered all the ingredients belonging to this Tincture, ſo as nothing remains, except putting hand to the Work, and begging God's Bleſſing upon it: For no good thing was ever the effect of idleneſs: But Praying, Seeking, and unwearied Labour, are the Well-Springs of all uſeful Arts.

And herewith I ſhall conclude the uſe of the *Salt* of Art, in preparing the univerſal Tincture upon all Metals, tranſmuting the ſame into ☉ and ☽. I ſuppoſe it hath been ſufficiently made out, that the foretold *Elias Artiſta* is nothing elſe, but this our *Salt* of Art, whereby the Redneſs in ☉, and Whiteneſs in ☽ are exalted into Tincture. Wherefore alſo this Salt, by thoſe who know its uſe, has been called the Monarch of Salts: For every Species of things hath its Monarch, excelling all the reſt of the ſame kind; upon which account, *Paracelſus*, who in his Life-time had not his Peer, obtain'd the Title of Philoſophers, Phyſicians and Monarch of Chymiſts. Foraſmuch therefore, as our Salt of Art hath not its like in the World, for working Wonders in *Alchimy*, it may well be call'd the King of Salts: Tho' indeed there be one only Salt which excels him, as far as *Elias* excell'd his Servant *Eliſha*: For as *Elias* went up to Heaven in a fiery Chariot, leaving his Mantle to *Eliſha*, ſo this Salt may more properly be compared to *Eliſha* than *Elias*, becauſe *Eliſha* ſtaid here beneath, and did not aſcend to Heaven, as *Elias* did. Now the Chymiſts generally prefer that, which aſcends by the force of the Fire, before that which ſtays behind, tho' this Rule be not without Exceptions; for that which remains is not always to be rejected, becauſe ſometimes much good lies hid in it: As we may perceive in *Elias* his Aſcenſion to Heaven, who left his Mantle behind, which was not without Virtue, as appeared when *Eliſha* with it divided the River *Jordan*, going over dry-ſhod. The Chymiſts commonly call that which remains after Diſtillation, or Sublimation, *Caput Mortuum*, but without good ground, becauſe in that which ſtays behind, often a great vivifying Virtue lies hid. This we may gather from the Virtue (as has been ſaid) remaining in the Mantle of *Elias*, and in the dead bones of *Eliſha*, which as ſoon as it touch'd the dead Body, raiſed it again to Life: If *Elias* his Mantle had been a dead thing, *Eliſha* could never have divided *Jordan* therewith, nor could *Eliſha*'s bones have raiſed the dead to Life, if they had been dead and without Power. Conſider well what I have ſaid, and you will find more in it, than I dare more plainly declare; remembring always, that *Jordan* is nothing elſe, but our ☿ Water.

Concerning the Salt *of Art.*

Having already heard, how by means of the fixative *Salt* of Art, common ☉ and ☽ may be prepared into a Tincture, for the cure of Men and Metals; it now remains to be declared, how, by means of the Volatilizing *Salt* of Art, moſt excellent Medicines may with eaſe, and ſmall Charges, in a very ſhort time be prepared, out of all Vegetables, Animals and Minerals. We are here to take Notice, as has been already hinted, that the Property of our *Salt* of Art, is, to make the volatile *Metallick* Subjects fixt; of which fixative Property, notwithſtanding it may in a few hours, eaſily and without Charges be deveſted, and a Power of Volatilizing all things introduced into it, inſtead thereof, by which, incredible things may then be performed, both in Phyſick and Alchimy. Of which Wonder-working *Salt*, the preſent World knows nothing at all, and probably nothing will be known of it, till God ſhall permit it to be revealed by *Elias* the *Artiſt*. What I know of it, I am willing to communicate for common Good, not doubting, but that God in his due time by means of Good men will reveal the reſt. To volatize this fixative *Salt* of Art, is an eaſie thing to the Wiſe, but to the Ignorant altogether incredible; though it be no difficult thing to me, to make it credible and apparent, which if thou wouldeſt do likewiſe, proceed thus: Pour upon our *Salt* of Art, in due proportion good Spirit of Wine, which draw off by Diſtillation, and you will have a wonderful Spirit, of great Virtue; but you will find your *Salt* of Art ſo weakened, as it cannot be uſed again: But the Spirit of Wine, impregnated with the Virtue of the *Salt*, performs Wonders, that were never yet made known to the World, of which we ſhall hear more

hereafter. For the Spirit of Wine in this abstraction hath its Virtue multiplied ten fold, so as it not only extracts the Essence of Vegetables, Animals and Minerals, both easily and suddenly, carrying them over the Helm; but also extracts the Tinctures from ☉ and ☽, and all precious and common Stones, and brings them over. Of which Extraction and Separation of the tinging Soul from fixt and unfixt Bodies, no Philosopher hitherto hath divulged any thing. Let us now take a view of the great Secrets, which may be obtained by means of our Alcolized Spirit of Wine. *Paracelsus* had an Alcolized Spirit of Wine, which he called *Alcohol vini*, with which he did great things; but it is not likely, that his *Alcohol vini* was of the same Virtue, as mine here described; for if so, it could not have been so long concealed. However it be, we cannot deny *Paracelsus* the Title of Monarch of Physicians and Alchymists, though he may have been ignorant of our *Salt* of Art, with which our *Alcohol vini* is prepared; for no Body knows all things; and God bestows his Gifts, as best pleaseth him.

But to our return to our *Alcohol vini*, and the manner of using it. First we are to take Notice, that as for Vegetables and Animals, they are to be reduced to Powder, if they be dry, but if fresh, they need only to be a little bruised or chopt, and then pour upon them our *Alcohol vini*; if the Subjects be dry, we may digest a while before abstraction, but in Case they be moist, we may distil the Spirit immediately, which carries over with it all the Virtue of the said Vegetables and Animals, together with the Taste and Smell, and poured upon Flowers, and distill'd, sometimes brings over their Colours also, which hitherto hath been looked upon as very difficult, if not impossible. But before we make use of it upon Minerals, we must prepare them, for our *Alcohol vini* is not strong enough to lay hold on hard Minerals, and compact Metals, so as to extract their Essences, and therefore they must be first opened with Waters, that are not Corrosive, and afterwards be digested with our *Alcohol vini* and then distilled; which being performed in this Order, the *Alcohol* will carry their Essences with it over the Helm. This is the true Preparation of Vegetables, Animals and Minerals, in order to the extracting of your Essences, by means of our *Alcohol vini*. But here we must observe, that this Preparation of fixt Metals, by opening of their Bodies, must be done with fixt Liquors, and not Volatile; for if the dissolvent were Volatile, it would come over in Distillation with the Spirit of Wine, and spoil all; because after Distillation, the Spirit of Wine must be separated from the Essence it hath brought over with it; now if the dissolvent, by being Volatile, should come over the Helm, it would remain with the Medicine, and consequently spoil it. We are therefore to remember, that this dissolvent must be Firey, not Corrosive, without any Smell or bad Taste: The dissolvent being as necessary to our Work, as is the Spirit of Wine it self: Wherefore he who intends to plant good Fruit, in this Gold-bearing Orchard, must be provided with both these Keys, *viz.* with a *Menstruum*, not Corrosive, to dissolve Metals and Minerals, and with a well prepared Alcolized Spirit of Wine, without which, he cannot obtain the Tincture of Metals.

Having thus spoken of the foregoing Preparation of Vegetables, Animals and Minerals, in general: I shall now proceed to shew in particular, how out of them most surpassing, and excellent Medicines may be prepared.

And first to begin with Vegetables; their Essences are to be distilled in *Balneo*, with a moderate heat, changing the Recipient when it is needful: For that which comes over, first is of another Nature, than that which distils next, and that again differs from that which comes last. There are some Vegetables, that first give their best part, and the worst last, whereas in others, the worst comes first, and the best stays till the last. For the rest, it is easily apprehended, that the Virtue of Flowers and Herbs, especially when green and tender, doth more easily yield to Distillation, and come over sooner than the Essence of hard Wood, which is more closely shut up in its Body. He that proceeds aright in this Work, will meet with great delight and Satisfaction, and bless God for the Communication of this Light. For our Alcolized Spirit of Wine brings over Vegetable Essences, of a most fragrant Odour, which common Spirit of Wine can never do: We may indeed extract Vegetables, and Minerals with common Spirit of Wine, but cannot carry the said extracted Essences over the Helm: Which extracts made with common Spirit of Wine, are not to be compared with those, which our *Alcohol vini* brings over with it, differing as much as the shell from the kernel. For our Essences, as soon as they are taken into the Body, penetrate it throughout, passing every where to find out their Enemies, and when found Attack, and put them to flight, which gross Medicines cannot perform. The like Virtue is also in those ☿ *Salts*, Tinctures or Souls of Metals, that come over in the flame of the distilled Spirit of Wine, which also penetrate the Body throughout, chasing their Enemies before them; and the Tinctures of Stones in the same manner prepared do the like. Which we must not so understand, as if the Alcolized Spirit of Wine were to be taken into the Body, together with the Tincture, for indeed it must be separated from it. As for instance, when I have brought over the Quintessence of Flints or Crystals, with our *Alcohol vini*, and have a mind to make use of it against the Stone in the Bladder or Kidneys, or Stones that are grown in the joynts, I must not exhibit this Essence, as it is mixed with the Spirit of Wine, for if so, the good effect, that might be looked for from the Essence, would be spoiled by the great heat of the Spirit of Wine, which is the reason the same must be separated from the Essence, before it can be given inwardly. Now this Separation cannot be done by Distillation, because both would come over together. Neither can the Tincture, or Essence of the Stone, be separated from the Spirit of Wine, by Precipitation. What is to be done therefore in this Case? The only way to attain our desire is, to kindle the burning Spirit, and let it flame away under a large and capacious Helm or Head, made for that purpose; by which means the Spirit of Wine is consumed in the flame, and the incombustible Essence of Crystal remains in form of a sweet and pleasant Oyl. We are also to note, that in this burning away of the Spirit of Wine, the *Sulphur* of Wine only is consumed, and the incombustible ☿ of Wine, being condensed in the Head, falls into the Receiver, in the appearance of a sweet Water. [*see more of this instrument in the Sixth Part of Phar. Spagyr.*]

N. B. We are to observe, that the most highly rectified Spirit of Wine, is much about half water, which water ascends with the flame, and is caught in the Recipient. Yet is not this ▽ any common ▽, but indeed a powerful ▽ of Life, especially when the Spirit of Wine hath been rectified from Aromatical,

tical, or Medicinal Subjects, but even without this, it is of very good use, because the incombustible ☿ of Wine lies hid in it, and may be separated from it, by abstracting the said ▽ in a very gentle vaporous Bath, which done, the ☿ of Wine stays behind, in the form of a white lovely *Salt*, full of heavenly Powers and Virtues: For which cause this *Salt* or ☿ of Wine, hath been always termed by the Philosophers, Heavenly *Salt*.

It is likewise to be noted, that after the ▽ is abstracted from the Spirit of Wine, the said ▽ is not devoid of all Virtue, as invisibly containing some part of the foresaid Heavenly *Salt*, especially if the Spirit of Wine in its Rectification, hath been impregnated with Spices, or other good Subjects: For according to the different impregnation of the Spirit of Wine, the Heavenly *Salt*, or ☿ of Wine, will be more or less powerful. Thus we have seen in what manner the Essences of Flints and Chrystals are to be prepared, with the help of our *Alcohol vini*.

When this Spirit of Wine Crystallized is kindled and burnt away under a large Head, the greatest part of the Essence of Crystals remains behind, in the form of a pleasant clear Liquor, which is the most Sovereign Medicine against all Diseases proceeding from *Tartar*, *viz.* Stone in the Bladder, Kidneys and other parts of the Body, which it dissolves, and carries off. But the most pure part of the Crystals mounts with the flame into the Helm, in form of a clear Water, which when abstracted in a vaporous Bath, the ☿ of Crystals stays behind, in form of a lovely white *Salt*, which is of far greater power in the Stone, Gout, and like Diseases, than the fixt Oyl or Liquor, which remains in the Vessel after the Spirit of Wine is burnt away. In like manner, we may proceed with other Stones. Yet we are to understand, that all Stones have not the same Nature or Property: Thus we find several sorts of Crystal, *viz.* some White, Transparent and clear, others White, but *Opake* and dark, also Green, Blew, Yellow, Red, and Black Crystals, all which by the help of *Salts*, are melted into Glass of several Colours. Amongst these Crystals are also reckoned. Flints, Pebbles, Gravel and Sand, which likewise suffer themselves with *Salts* to be melted into Glass. All these forementioned Stones, may with *Alkalick Salts* be melted, and afterwards by *Deliquium* be resolved into a Liquor, concerning which Liquors, I have treated at large in the Second Part of my Furnaces.

These Stones that suffer themselves to be melted, with the Addition of *Alkalies*, may also, with Lead-ashes, be reduced to transparent Glass. Whereas precious Stones, *viz.* Diamonds, Rubies, Saphirs, Jacinths, Granates, *&c.* are of a quite different Nature, which neither by *Alkalies*, nor Lead, can be run down into Glass: Wherefore also none have been found hitherto, that have been able from them to prepare any good Medicine, as not yielding to the most Corrosive Waters whatsoever.

N. B. And though indeed, I know a way to dissolve them without any Corrosive, yet do not I think it proper, to Communicate the same in this publick manner.

There is another sort of Stones, which are commonly found in Rich and fat Earth, and sometimes also in Rivers or Brooks, such as *Lapis Judaicus*, *Lyncis* and others, which being not very hard, may be dissolved in good Spirit of Salt, which Solutions are by some of our common *Chymists* used against the Stone, but without any good Success, forasmuch as the Body of the Stone is not at all meliorated by being dissolved in Spirit of Salt, but rather made worse; because by this means, there is no Separation of the pure from the impure. But if any Man will take the pains to reduce these Stones into Essences, in the way before specified, he will find them much more available in all sorts of *Tartarous* Distempers.

There are also several kinds of Lime-stone, which cannot be melted with Addition of *Alkalies*, or the Ashes of Lead, but by a strong Fire are burnt into Lime. Amongst which Lime, Stones, we may reckon the *Ludus* of *Van Helmont*, which like other Lime-stones, may be sublimed with our strong ☓, and afterwards reduced into a Liquor, of which I have treated elsewhere, and particularly in the Seventh Part of my *Pharmacopœa Spagyrica*. Out of these Stones, after they have been first burnt into Lime, a most excellent Medicine may be prepared against all kinds of the Gout: *Basil Valentine* assuring us, that he with Essence of quick Lime, cured the Chancellor of the Emperour of *Germany* of the Gout: Which we may the rather believe, because *Basil Valentine* knew the way of separating the ☿ from the Spirit of Wine, by enkindling it; and hath also described an instrument of Copper, for performing that Operation: And knowing all this, he could not be unacquainted, that the Essence of Quick-lime, being united with Spirit of Wine, and afterwards meliorated, and putrified by burning it away, was separable from it, which he having reduced to Practice, obtained this excellent Medicine for curing of the Gout.

We are further to know, that there be other, and better Stones, to prepare an universal Medicine against the Gout and Stone, by means of our *Alcohol vini*, after they have been first burnt into Lime, *viz.* Oyster shells, which, being burnt, afford a Lime that is very Caustick; and of a like Nature are all Sea-productions, *viz.* the Stones that are found in Spunges, all sorts of Coral, Pearl, and Mother of Pearl, all which may be reduced by Fire, into a Lime of great and excellent use.

But above all other Stones, I esteem those that are found in Beasts, Birds, Fishes or Man, which being reduced into a Calx, and their Essences extracted with our *Alcohol Vini*, may then be brought into a pleasant Liquor of great Use.

Amongst Fishes, the best Stones are found in Haddocks and Whitings, Crabs Eyes also are very good, but must be calcined before they can be of any good use in Physick; for without that, they are more proper to generate the Stone, than to expel it.

Having thus declared, how, from some Stones, good Medicaments may be prepared against the Gout and Stone both of the Bladder and Kidney; we will next shew, what kind of Stones are proper to be extracted with our *Alcohol Vini*, in order to the obtaining of true Tinctures for Men and Metals. For all Stones that have good fixt colours, are not therefore fit to have their Tinctures extracted; because some of the Precious Stones are too costly, though we should only make use of their Fragments. Some will not submit to any Operation, *viz.* Granates, Saphires, Rubies, Jacinths, Emralds, Turkoises, *&c.* though they abound with much fixt Tincture; whereas all those Stones which are high of colour, and suffer themselves to be dissolved, are proper for this work, because without preceding Solution, it is impossible to extract the Tincture from hard and compact Bodies: Wherefore we must make choice of Stones that are soluble, and abound with fixt Tincture, *viz.* Green and Red

Jasper

Jaſper Stones, *Lapis Lazuli*, and the Black *Magneſia* which contain abundance of Solar Tincture. All Stones likewiſe that are high coloured, and break ſmooth like Glaſs, whether found on Mountains or in Brooks, are good for this purpoſe.

It was becauſe of this Solar Tincture abounding in the Jaſper Stone, that the Ancients preferr'd it before ☉, as containing a moſt high and excellent Tincture. A very rich Tincture may alſo be extracted from the *Lapis Lazuli*; and from the Black *Magneſia*, (which is not coſtly) a richer. Let us therefore take this deſpiſed Stone in hand, and ſee how eaſily its Tincture, by means of our *Alcohol Vini* may be extracted, and what uſes it ſerves for, as well in Phyſick as Alchimy.

The PROCESS.

℞. ONE pound or two of black and ponderous *Magneſia*, pulverize the ſame, and diſſolve it in our Univerſal Stone-Water, wherewith all hard Stones may be diſſolved, and thou wilt have a Solution of a Graſs-green-colour, filter it, and in caſe thou haſt proceeded aright, the undiſſolved *fæces* will be of ſmall quantity.

Now is thy Solution ready to have our *Alcohol Vini* pour'd upon it, in order to the extracting of its Tincture, and carrying it over the Helm.

N. B. That notwithſtanding the Solution be at firſt of a green colour, yet the Spirit of Wine in Diſtillation comes over yellow as *Sol*. And when the Spirit of Wine is kindled under a large head, the pure *Mercury* of the *Magneſia* aſcends with the flame, which is of great uſe in Phyſick; and a Blood-red Liquor ſtays behind, being not only a Tincture for the Bodies of Men and Metals, but alſo by means of the ſame may Cryſtals be tinged with ſeveral fair colours, ſo as to reſemble Precious Stones in all things, except hardneſs. I dare not ſet down here the manner of applying this Tincture to white Metals, he to whom God vouchſafes this Tincture, will eaſily find out the uſe of it.

As to the Phyſical uſe, this Tincture opens Obſtructions of the Liver, Spleen and Lungs: The white *Mercury* come over with the Flame is an excellent Medicine, ſtrengthening the Heart, Stomach, Head and Reins, and a great Remedy againſt the Gout. In a word, he that is Maſter of this Tincture will find much more in it than I have here hinted.

In like manner, as hath been ſaid of the *Magneſia*, we may proceed with other Stones, to extract their Tinctures, all which have different properties, according to the nature of the Stones from whence they are prepared.

We proceed now to ſhew, how by means of our *Alcohol Vini* the Tinctures or Eſſences of Minerals and Metals, without any preceding Solution, or other preparation, may be eaſily brought over. The way is thus:

℞. What quantity you pleaſe of any Sulphurous Marcaſite, whether of ♂, ☿, ♃, ♄, ☽ or ☉, make them red-hot in a Crucible in a Wind Furnace, and then put them red hot as they are, into my ſecond Diſtilling Furnace, fitting a large Recipient thereto, and pour upon them to the quantity of about an Ounce of our *Alcohol Vini*, cloſing the Furnace again immediately; by this means the Spirit of Wine will enter into the Stones, yet becauſe of the great heat will not long continue there, but aſcend and carry over the Metalline Spirit with it; which done, pour upon them another ſpoonful of Spirit, which when come over, pour on another, repeating this as oft as ſhall be needful. After that the Marcaſites or Metalline Stones are grown cold, they muſt be made red-hot again, and proceeded with as before, till a ſufficient quantity of the Metallick Spirit be obtained. Then burn away the Spirit of Wine, and there will remain a glorious Eſſence of Metals, which thou mayeſt make uſe of, according to thy beſt knowledge. One thing I can aſſure thee, that this is the eaſieſt way to obtain Metallick Spirits in quantity. And though the Proceſs appears plain and ſimple, yet more may be diſcovered and attained thereby than many would imagine. I know what I write, though it may be every Man will ſcarcely underſtand me; which is very fitting, to the end theſe great *Arcana* may not be proſtituted to the Unworthy. He, who cannot make Metallick Spirits according to this way, may diſſolve the Metals themſelves in proper Diſſolvents, pour Spirit of Wine upon them, and diſtil their Eſſences, which he may then make uſe of, as his underſtanding ſhall guide him.

I have already declared, that Metallick Spirits, when pour'd together, do Meliorate one another. I ſhall add no more at preſent, having already declared too much to the Unworthy, and for thoſe that fear God, they will be further aſſiſted from above, and led to the deſired end.

In like manner may the Eſſences of all common Stones, Pebbles, Metalline Stones, colour'd Earths, *&c.* be extracted without any foregoing preparation; for which God be praiſed for evermore. *Amen.*

In the ſame way we can obtain the Eſſences of many other Mineral Subjects, without any preceding preparation, eſpecially of ſuch as are Volatile, *viz.* Kobolt, Arſenick, Orpiment, Biſmuth, Zink, *Lapis Calaminaris*, and the like Realgars, from which we may diſtil very poiſonous, but withal admirable, Spirits, in order to the Melioration of Metals. We may alſo take the ſame courſe with compact Metals themſelves, and diſtil their Spirits without any foregoing Solution, *viz.* we muſt file them ſmall, make them red-hot, and put them into the Diſtillatory, and then proceed as before hath been ſaid with the Marcaſites, and the Metalline Spirit will come over with its natural ſmell, taſte and colour, in which Spirits great wonders lie hid, but are of greateſt uſe in Meliorating of Metals. Read what *Paracelſus* writes to this purpoſe in his Book called *Vexatio Alchymiſtarum*, where you'l meet with what will ſatisfie you in this matter. Conſider well of what I have ſaid, and thou wilt find more than I dare ſet down; for it is no ſmall or common thing to obtain the pure Souls of Compact Metals, without any foregoing Solution of their Bodies.

N. B. Thoſe Metals which are molten with Minerals, being filed, and proceeding with them as aforeſaid, afford a Spirit higher in colour, and of a ſtronger ſmell than ſimple Metals. Take an inſtance from Braſs, of which if you lay a piece upon a red-hot Coal, it will ſend forth a bad ſtench, or put Coals into a Braſs Chafing-Diſh, and you'l perceive the ſame; which bad ſmell proceeds from the *Lapis Calaminaris* which is joyned with the Copper, the ſaid *Lapis Calaminaris* being a volatile and ſtinking Mineral. So likewiſe when ♀ is made white by the addition of Arſenick, it ſtinks much worſe than when it is join'd with *Lapis Calaminaris*, as being much more poiſonful. This ſtinking fume which proceeds from Braſs, though it

be

be a Spirit, yet is not without a Body, and may be called a ſpiritual Body, or Bodily Spirit. Theſe fumes are hurtful to the Brain and Heart; and therefore a wiſe Man endeavours to catch this Volatile Spirit, and to turn it to a true fixt Tincture, fixing white Metals into a permanent Yellow; as the ſtinking fume of White ♄, made ſo by *Arſenick*, may be reduced to a Tincture, which will tinge Red ♀ into White.

I have ſaid enough here, he that hath ears to hear, let him hear. He, who deſires to know more concerning thoſe *Metallick* Odours, may read *Braceſcus*; where he will find, that from them the Philoſophers Stone, or higheſt Medicine againſt all Diſeaſes of Men, and Metals may be prepared: Of which, elſewhere I may have occaſion to treat further.

It remains now to diſcover, in what manner the Medicinal tinging Spirits, or Souls of Stones, are to be extracted, wherewith great Honour and Riches may be obtained in the Practice of Phyſick. The Proceſs is the very ſame, as with the *Marcaſites*; for when white Pebbles and Chryſtals, or colour'd Stones, as *Jaſper* Stones, *Lapis Lazuli* and the like, being firſt made red hot, have our *Alcohol Vini* poured upon them in a convenient Diſtillatory, the Spirit of Wine carries over their ſeveral Colours, which Tinctures are of great uſe in Phyſick. In this way, we may get a Spirit from Lime ſtones, which is moſt ſubtil, and ſtrong of any other whatſoever.

As for Corals and Pearls, they are not to be made red hot (becauſe their Virtue is deſtroyed by ſtrong Fire) but only heated, and pour Spirit of Wine upon them, by which means the Spirit of Wine will bring over the Eſſence of Corals of a curious red Colour, and that of Pearls white as Milk.

The Stones that are found in Fiſhes, Crabs eyes, ſo called, need only to be pulverized, without heating them, and in abſtracting the Spirit of Wine from them, we obtain all their Virtues; which Spirit of Wine being afterwards ſeparated there from, as I have taught, or according to my new invention burnt away, we ſhall get the true Magiſtery of theſe Stones, being a pleaſant *Salt*, full of Virtues, and without any thing of Corroſiveneſs. This *Salt* is the true Magiſtery of theſe Fiſh-ſtones. The like true Magiſteries may, without the aſſiſtance of any Corroſive, be prepared of Coral, Pearls, Mother of Pearl, Cockle-ſhells, and the Egg-ſhells of ſome particular Birds, as alſo of ſoft Stones, ſuch as *Lapis Lyncis*, *Judaicus*, *&c.* Let no Body think ſtrange, that I make mention here of Egg-ſhells, amongſt the reſt; ſeeing it is certain, that they have their Original from Stones, as Experience teacheth us, for when Hens are coop'd up in the Winter time, in places where they cannot meet with Sand, or ſmall Stones, they lay Eggs without ſhells. Wherefore Egg-ſhells are not to be contemned, for when according to my Inſtructions they are reduc'd to Magiſteries, they are of great uſe in curing the Stone and Gout: And are uſed with extraordinary Succeſs, to haſten the Birth in Women, ſtrengthning both Mother and Child, and helping to expel the After-Birth.

Swallows Egg-ſhells may eaſily be had, foraſmuch as after they have hatch'd their young, they caſt them out of their Neſts, and afford an excellent Medicine againſt the Falling Sickneſs. The Egg-ſhells of the Wag-tail would be yet more effectual to this purpoſe, if they could be got, for no Bird is ſubject to the Falling Sickneſs, but it: For being caught, and running about with other Birds in the Winter, it's oft ſeiz'd with the Falling Sickneſs, his Feet ſtagger, his Head and Tail tremble, and at laſt falls on his Back, but continues not ſo long, for riſing again, he plucks out ſome of his Feathers, and thereupon immediately recovers, and runs about, eats and drinks as before: Of whoſe Feathers, ſince their Egg-ſhells are not to be got, a Magiſtery may be prepared againſt that Diſtemper.

They who know, that great Virtues are contained even in natural ſuperfluities, will not wonder at my treating here of Egg-ſhells and Feathers. Some great Philoſophers have ſet down the way of making the Philoſophers Stone of them; amongſt the reſt, a certain Author, writing concerning Mans hair and Egg-ſhells, concludes thus: *Though theſe matters may ſeem to be very ſtrange and abſurd, yet who is there that knows all things*, &c?

Many other Subjects might be hinted, from whence Magiſteries may be prepared, but I think it needleſs, he who ſets upon the work will eaſily find many more, than I have mentioned. I ſhall only, by the way, take notice, that the common Magiſteries of the *Apothecaries* Shops, are no Magiſteries, but mere dead, unprofitable Powders.

We now proceed to the Preparation of Vegetables and Animals, which being of different Natures, muſt alſo differently be prepared. As for Inſtance, *Opium* (which is a tough Juice, and cannot be pulverized) muſt be cut in thin ſlices, and laid on a Tin Plate before the Fire, or any other convenient way, to be dried, and then powdred; which done, we muſt pour upon it ſome of our *Alcohol* of Wine, and after a ſhort digeſtion diſtil it, by which means we ſhall get it's moſt ſubtil Eſſence; and, if afterwards we burn away the Spirit of Wine, part of this Eſſence will aſcend with the *Mercurial* Water, and other part ſtay behind. The former of theſe, *viz.* the Volatile *Mercury* of *Opium* is ſo powerful, that when only ſmelt to, it is of better effect than the common *Laudanum Opiatum* taken in ſubſtance. The Red Liquor, which remains behind in the Cup or Diſh after the Spirit of Wine is burnt away, may be taken inwardly. That which remains in the Glaſs Body after Diſtillation is of no great uſe, and may be caſt away; yet if any one will take the pains to diſſolve it in common ▽, filter, and after reduce it to the conſiſtence of Pills, perhaps he will not find it much inferior to the common *Laudanum Opiatum.* The Oyl which remains in the Cup is of very excellent Virtue, as having paſt the Purgatory Fire of the Spirit of Wine, whereby it is much corrected: Wherefore alſo we find, that this Oyl is wholly deveſted of that loathſome Smell that is in *Opium.* But yet the *Mercurial* Virtue, which aſcends together with the Flame, is far better than that which ſtays behind, not only in Virtue, but becauſe being in the form of a clear ▽ without Taſte or Smell, it may with the more eaſe be taken by the Sick. The ſaid Oyl may alſo with Saffron, and the Narcotick ♆ of the *Vitriol* of ♀ be thickned and reduced to the Conſiſtence of Pills.

This Medicine is of great uſe, for ſuch as are in pain, and want their due Reſt, removing the one, and procuring the other: And no Body can be ignorant, how neceſſary Sleep and Abſtinence are, to preſerve Health, as well as to remove Diſeaſes.

According to this way, we may extract the Virtues of all vegetable Subjects, and greatly exalt, as well as correct them, where need is.

N. B. Henbane and *Tobacco*, this way prepared, afford *Narcoticks* not inferior to *Opium. Aloes*, *Myrrh*, and *Saffron* handled in this manner, make an Elixir *Pro-*

prietatis, ten times better than that described by *Paracelsus*, or *Helmont*: For our *Alcohol Vini* brings over only their purest Essence, which is afterwards yet further exalted through the Flames of the Spirit of Wine. According to this method, a Man may prepare from Vegetables excellent Cordials, *Cephalicks*, strengtheners of the Stomach, *Nephriticks*, *&c.* which in their effects will far exceed the Common. Only we are to observe; that when we have a mind to prepare an universal Medicine, we need not to meddle with Vegetables or Animals, which are Grandfather *Demogorgons* green Cloak, forasmuch as a little piece of his Heart, is far more valuable than his whole Cloak; wherefore he that would prepare an universal Medicine, of greater Virtues than all Vegetables and Animals contain, let him take to Task a part of this *Demogorgons* Heart. Concerning which, if the Reader desire further to be satisfied, let him peruse a Treatise of the incomparable Philosopher *Joannes Bracescus, of the Tree of Life*; where he may be informed, who this *Demogorgon* is, what his clothes, and what the inmost Blood of his Heart are.

Now by the way, to speak a little of this *Demogorgon*, we are to understand, that the Ancients always described their universal Work, not plainly so, as to be apprehended by every one, but wrapt up in Riddles and Allegories; all of them pointing to this *Demogorgon*, who has his Seat in the Center of the Earth, having a rusty Colour'd, and green Cloak cast about him; which in plain terms, is nothing else but the Central Fire, which God, when he created the World, placed there as an everlasting vivifyng Fire; by means of which quickening Fire, not only Metals and Minerals are produced, but also all Herbs, Plants and Trees: Upon which Account, the ancient Philosophers have described this *Demogorgon*, to be the Grandfather of all the Heathen Gods, that is *Metallick* Subjects, and an Upholder of, and Provider for all things that are within, as well as without the Earth; for all things proceed from one Original, *viz*, this *Demogorgon*. Concerning which, *See the Twelfth Treatise of* Sendivogius.

Metals and Minerals, are as it were the Shirt, or inmost covering of *Demogorgon*, whereas Vegetables and Animals, are but his Cloak, or upper Garment. The Ancients have writ much concerning this *Demogorgon*, attributing to him, not only the Generation and growth of Stones and Metals, but declaring him to be the Father of those living Spirits, which are often found in the Mountains, where Mines are, especially of ☉ or ☽, about which, if the Reader desire to be further satisfied, let him read George Agricola *his Treatise concerning Subterraneous living Creatures.*

To return then to our *Demogorgon*, I say, there are found some contemptible Minerals, in which all the Virtues of Vegetables and Animals lye concentred, which Minerals take their Original from the purest Heart-blood of *Demogorgon*: Such Minerals as these we are to take in hand, if we would prepare an universal Medicine against all Diseases, as well as a Tincture, to meliorate all white Metals with great Gain and Profit. We are also to observe, that such an universal Medicine, may easily, with little Charges, and in few days, be prepared: For the Minerals themselves cost little or nothing, the Dissolvent is very cheap, and the burning Spirit is not Chargeable, so that an Universal Medicine, to meliorate Vegetables, Animals and Minerals, may be made with the Charge of an Angel; which, certainly, is a strange and wonderful *Compendium.* All this may be done with the help of our Spirit of Wine *Alcolisatus*, without which, the Essence of these Minerals cannot be brought over, nor be made perfectly sweet and fine, without enduring the Purgatory of its refining Flames: Wherefore, also our *Elias Artista*, or *Salt* of Art, wherewith we acuate our burning Spirit, and make such a wonderful *Menstruum* of it, may well be called the Monarch of *Salts.* And to demonstrate, that such a Medicine prepared of Metals or Animals, with the help of our *Salt* of Art joyned with Spirit of Wine, is not only able to cure all the the Diseases of Men and Metals, but also of Vegetables, appears first from hence, that an universal Medicine can scarcely, or at all be prepared without the Concurrence of Vegetables and Animals: For which reason the Philosophers say, that their Stone is Vegetable, Animal and Mineral; if then the universal Medicine be made up of these three, we must conclude also, that it is Master and Commander over them. The use of this Medicine in the several three Kingdoms, is as follows. When by means of our *Tartarized* Spirit of Wine, thou hast brought over the pure Essence of a Metal or Mineral, and separated the Spirit of Wine from the *Metallick* Essence, by burning it away, then the said Essence stays behind in the Cup or Dish, wherein the Spirit of Wine was burnt away, and may without any other Preparation be made use of, for the Cure of all curable Diseases. But when we have a mind to make use of this Essence, for the meliorating of Metals, we must first ferment it with common ☉ or ☽, for without this, the Soul or Quintessence of Metals can have no ingress into Metals, so as to unite with them in a Fire of Fusion. We are also to note, that when this *Metallick* Essence is fermented with *Sol*, it becomes a *Solar* Tincture, but when with ☽, it only affords a white Tincture. It is also to be observed, that when we take two parts of ☉, and one of ☽ for our ferment, we shall have a Red Tincture, and so on the contrary, if we make use of two or three parts of ☽, to one of ☉, it will only be a white Tincture, because the predominant Metal determines the Tincture. But he who hath once obtained a well prepared Quintessence of Metals, will easily know the ferment and way of applying it, for a due application is of great moment in this matter. I have known some, who had extracted good Tinctures from ♂ and ♄, but understood not the way of fermenting them, that is of joyning their ferment without their Tinctures; neither did they understand the Inceration, that is, the way to give to your Tinctures easie Fluxibility and Ingress, so could not arrive at their desired End. Were the World worthy of it, I could set down an easie, cheap and short way, to extract much ☉ out of ♀, by which means every one that is somewhat skilled in Distilling, Melting and Cupelling, might have a Rich and inexhausted Mine in his own House, but it is much better to be silent, than to strengthen Men in their Pride and wickedness.

But to return to the Medicinal use of our Tinctures, we are to take Notice, that the Red Oyl, which remains after the burning away of the Spirit of Wine in the Cup, is fittest to make a *Metallick* Tincture of: But the ☿ or Celestial *Vitriol*, which mounts with the Flame of the Spirit of Wine, is the most proper Medicine for human Bodies: For this pure *Mercurial* ▽ is the true and best ▽ of Life, wherewith, not alone Men, but also other Animals, yea and Vegetables too, may be cured of all Diseases, and Evils incident to them. And forasmuch, as the highest Medicine of Vegetables is the Nourishment they draw from the Earth,

Earth, the warmth of the Sun, and fruitful Rain, and that on the contrary a dry and barren Soil, and want of the cheriſhing heat of the Sun and Rain, are the Death of all Vegetables, it is apparent, that there can be no better Remedy to keep off the Death of Vegetables, than this our ſweet cheriſhing, and vivifying ▽ of Life, or Celeſtial *Salt*: For when any Seeds of Vegetables are ſteeped therein, and ſet only in Sand, they immediately ſhoot up and grow: And having this effect upon Vegetables, we have the leſs reaſon to doubt of its cheriſhing, and vivifying Virtue on human Bodies, as indeed there cannot be a better Medicine to rid the Body of Man, of all manner of Diſeaſes than this Univerſal Bleſſed ▽ of Life, or heavenly Rain ▽. When we attentively conſider Nature, we find, that the Life and growth of all Vegetables, Animals and Minerals, is Originally from the Air, or an Airy volatile Spirit. Thus we can make all hard Stones and Metals grow as it were in a moment, by means of ſuch a volatile Spirit, concerning which, I have ſpoken in the Second Part of my Furnaces.

This ſudden growth of Stones and Metals, I have many years ſince ſhewed to ſome of my Friends, who greatly admired the ſame, but could not comprehend that reaſon thereof. Now therefore, to ſatisfie the Searchers after truth, I declare, that all growth, whether in the *Microcoſme*, or *Macrocoſme* proceeds from a Spirit, or Volatile *Salt*, ariſing from two contraries, *viz.* an *Acid* and an *Alkali*; for when an *Alkali*, and an *Acid* Spirit meet, they cauſe an Effervеſcence, during which, there proceeds from them both a very ſubtil Spirit, which has the Nature and Property to make all things grow. If a Man takes this Spirit inwardly; it procures and preſerves health; if it be joyn'd to an Herb, it makes it to grow and ſhoot up ſuddenly. With this Spirit we can make an Herb grow from its Seed in the midſt of Winter, (but it muſt be in a warm Room,) ſo as it may be ſeen to grow; which my ſelf have performed more than once. And to make it appear, that this ſwift growth only proceeds from a volatile Spirit, produc'd by the ſtrife of two contraries, I'le give this inſtance; pour one Pound of Oyl of *Vitriol*, upon one or two Pound of calcined *Tartar*, not at once, but by degrees, and at ſeveral times, and it will cauſe a great ſtrife and Effervеſcence, cover the *Cucurbit* with its Head, and give Fire in a Sand Furnace, by which means a very ſubtil volatile Spirit comes into the Receiver. If before this Work be undertaken, a Stone hath been diſſolved by the calcined *Tartar*, and a Metal in the Oyl of *Vitriol*, then the Spirit, which proceeds from them, will be much more powerful; becauſe the Virtue both of the Stone and Metal comes over with the Spirit. In this manner may a volatile Spirit be had from all *Acids* and *Alkalis*.

To demonſtrate this further, that the growth of all things proceeds from the ſtrife of two contraries, take this inſtance: Diſſolve ſome Iron or Copper in Spirit of *Salt*, or Oyl of *Vitriol*, draw off the Flegm, in which Diſtillation none of the *Acid* Spirit will come over; becauſe it is joyn'd and concentred with the Metal, animating and diſpoſing it to ſhoot up and to grow ſwiftly, ſo as the eye may perceive it grow, like a Tree with a Body, Boughs, Branches, and Twigs. Take this Spirit of *Salt* or *Vitriol*, concentred by the ♂, as ſoon as you have taken it out of the Furnace, whilſt it is yet warm, and break it into little Bitts, about the bigneſs of large Peaſe (if you ſhould ſuffer it to grow cold, it would by attracting the Air, ſuddenly run into an Oyl *per deliquium*.) Theſe pieces of animated ♂, muſt be joyned with its contrary, for which you can chooſe nothing better than a Liquor of Flints prepared in the ſame manner, which I have taught in the ſecond part of my Furnaces. The Glaſs, wherein you put this Liquor of Flints, muſt be of the ſame wideneſs at the top, as at the bottom, and about an hand-breadth high, and fill'd with the ſaid *Alkalious* Liquor, to which, put your *Acid* concentred by the ♂, laying the pieces orderly a thumbs breadth from one another, and place the Glaſs, where it may not be ſhaken or jogg'd. As ſoon as theſe contraries are thus joyned, they begin to act upon one another; but foraſmuch, as the one of theſe contraries is concentred by the ♂, and become hard, it cannot mingle it ſelf with its adverſary, or deſtroy it, ſo they only vex and anguiſh one another, in doing which, a warmth ariſeth between them, and the one contrary puſheth the other to ſhoot and grow; the hard and dry part, *viz.* the animated ♂ drawing ſo much moiſture from its contrary, the Liquor of Flints, as makes it heave and begin to grow in form of a Plant, with Root, Stock, Branches, and Twigs, very pleaſant to behold, the growth being very ſwift, ſo as within an hour and an half, or two hours at the moſt, the whole Glaſs is fill'd with little iron Trees, which grow harder and harder, and when they are hard enough, (which will be in the ſpace of twenty four hours) then the Liquor of Flints muſt be let out from it through a hole, left on purpoſe in the bottom of the Glaſs, and the Plant, or little Tree, remains. If we deſire to make a more pleaſant ſight of it, we may take ſeveral Metals, and make them grow up like a Tree; ♂ affords a dark brown, *Venus* a green, ♄ ♃ and ☿ a White and Grey, ☽ a Blew, and ☉ a Yellow Colour. Minerals alſo give different Colours from Metals; *Lapis Calaminaris* grows not into Trees, but into the reſemblance of Mountains and Rocks of a White and Greyiſh Colour.

If we have a mind to make Stones to grow, we proceed thus, firſt we melt the Stone, whether White or Coloured, into a tranſparent Glaſs, and pour it forth into a Copper Baſon, where it will flow broad and thin, and will be the fitter to be broke into as ſmall pieces as we deſire. Which peices we place as before in a flat bottom'd Glaſs before deſcribed, which muſt be full of an *Acid* Spirit mixed with water, ſo as it may neither be too ſharp, nor too weak; for if it be weakned with too much water, it will not retain ſtrength enough to make it grow; and if the *Acid* be too ſharp, it will diſſolve the *Alkalized* Stone, wherefore great care muſt be taken, as to this particular.

N. B. The *Magneſia* gives a Blood-red Tree, and much more beautiful than any of the Metals: Only obſerve, that Metals may be made to grow with leſs trouble than Stones.

From what hath been ſaid, it appears beyond diſpute, that the growth of Vegetables, Animals and Minerals (Stones not excepted) proceeds from two contraries. I could eaſily make this out more amply and fully, but having treated of the ſame in other parts of my Writings, I ſhall let it reſt here.

An

An Appendix or COROLLARY.

I Have in the foregoing Treatiſe declared the uſe of the *Salt* of Art, both in Phyſick and Alchimy, and have ſet down nothing, but what my ſelf have experienced. What I have writ concerning our *Alcolized* Spirit of Wine, is alſo the very truth: And tho' what I have here ſet down might ſeem to ſuffice; yet I cannot, before I conclude this ſmall Book, but mention a much greater Gift of God, than that of which I have ſpoken here, *viz.* that God hath vouchſafed Mankind, for preſerving their Health, a Subject, wherein the Powers and Virtues of all Vegetables, Animals and Minerals, are ſumm'd up and united together; which Subject may be had in all places for nothing, and however contemptible it may ſeem to the ignorant, yet it is the matter of the higheſt Medicine in the World. Every Man can have enough of it from himſelf, needs therefore not to go to another for it. *Adam* and *Eve* our firſt Parents brought this matter with them out of Paradiſe; yea, every one brings it along with him from his Mothers womb.

Let no Man imagin, that I ſpeak here of Urine, or Mans Dung, it is ſomething elſe, and more deſpiſed than either of them, ſo that a proud Man will ſcarcely light upon it. I ſay, if a Man know this Subject, and how to make uſe of it in Phyſick, he may well account himſelf happy, as needing nothing of all that is in the World beſides, in Caſe he hath only ſtrength, place, and convenience to prepare the ſame. The Subject coſts nothing, and the Preparation requires neither Glaſſes, Coals nor Furnace. I commend this Subject to Phyſicians above any other in the World, the Preparation being eaſie, and without Charges, and may be finiſhed in few days: So that the knowledge of this Subject, and its eaſie Preparation, ought not to be look'd upon, as an invention of Man, but as a wonderful, and undeſerved Gift of God, reſerved only for thoſe, who deſpiſe the World with all its Vanities, renounce the Devil and all his Works, and avoid the Company of wicked Men, his adherents.

Of the Three moſt noble STONES generated by Three Secret FIRES.

AND

Firſt, Of the Stone of Philoſophers, which is prepared by the Secret Fire of the Wiſe.

Secondly, of the upper and lower Thunder-ſtone, how they are generated above, by the Meteorological Fire; and below, by the ſecret Artificial Fre. And,

Thirdly, How the Lapis Ignis, *or Fire-ſtone of* Baſilius, *is to be prepared out of* Antimony *by Art.*

And how thoſe Three moſt noble Stones of the World, are to be uſed in Phyſick and Alchymy. Tranſlated out of the High-Dutch

Reader,

IN the end of the Appendix to the Seventh Part of my *Pharmacopœa Spagyrica*, I have made mention of Three Fires, which are not Common, but unknown to the World. By which are generated three wonderful Stones, which I did intend to publiſh. Firſt, of the ſecret Fire of Philoſophers, commonly called the Fire of *Artephius*, becauſe *Artephius* a very ancient Philoſopher did firſt write of it, who was alſo envious like others, and would write nothing of it, till he came to be nine hundred Years old, which way the Philoſophers Stone was to be made by this Fire. Theſe Writings have been long toſſed up and down the World, before any could be certain, whether or no this miraculous Fire could be found in Nature. At length ſome Philoſophers attain'd its knowledge, and pnbliſhed it for the good of the World. But becauſe, thoſe Philoſophers were very obſcure in their Writings, the Art could not be made common, but remaineth ſecret to this hour: So that one of a Thouſand among the now reputed Philoſophers, (who have fill'd the whole World with their unexperienced Writings) ſcarcely one is to be found, who know any thing of it. And becauſe this ſecret Fire was called by the true Philoſophers, *Ignis Philoſophorum*, it would have becomed them, to know ſomewhat of it. *Helmont* the moſt experienced and learned Philoſopher of his time, although he had ſtudied long in the Univerſities, yet he doth not Glory in any Arts he there learned: But on the contrary, he ſaith, that Phyſick, as it is taught in the Schools,

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is of no value. And, that not the Universities, but the Fire, made him a Philosopher. And therefore, he calls himself a Philosopher by the Fire. And without doubt, our secret Fire was known to him, as appears by his excellent Writings. For his *Elementum Ignis Veneris*, to which he attributes so many Virtues, could not well be made, without this secret Fire. A Quintessence may be drawn out of *Venus*, but that will not effect, what the Red Element of the incombustible *Sulphur* can. *Paracelsus*, in his Book of *Sulphur*, writes, that an excellent *Elementum Ignis* may be made out of common *Sulphur*, which he so highly commends, that he dares to say, that except a Physician hath this Element of Fire, (that is the fixed Quintessence of *Sulphur*, among his *Arcanums*, he cannot rightly be reputed a Physician, but a Money Catcher, and Robber of the Sick. In my lately published Treatise of *Sulphur*, I have also described an *Elementum Ignis*, which is certainly a very excellent Medicine against all Cold Distempers, but this is not yet fixed, but combustible, but the Element of Fire ought to be incombustible. For as long as a Medicine made out of *Sulphur* is still combustible, and subject to blacken Silver when touched with it, it cannot be reputed the true *Elementum Ignis Sulphuris*. For the true Element of Fire of *Sulphur* doth not make Silver black, but tingeth it with a constant Golden Colour, which cannot be washed off. As also, the Element of Fire ought to be of this Nature, to enter a Red hot Plate of Silver without fume, as Oyl sinks into dry Leather; and to tinge it Yellow. Also, it ought to tinge common ☿ into Gold, when added to it in a due heat. This Quintessence of *Sulphur*, also must not be burnt by the Fire as other Oyl, but remain incombustible. Therefore, the Philosophers have called it an incombustible Oyl, a permanent Water, *Aurum potabile*, *&c.* When it hath those Virtues, then it can perform what *Paracelsus* attributes to it, *viz.* Wonders both in Physick and Alchymy; and by this, *Aristotle* and his followers (who assert, that the Species of Metals cannot be transmuted) are quite out of Doors.

It is true, *Aristotle* also saith, that the Metals cannot be transmuted, if they be not first reduced to their first matter, of which I have sufficiently treated. This our fixed Oyl of *Sulphur* transmutes the Metals without any precedent reduction of them to their first matter. For our secret Fire hath taken away whatsoever was pernicious or combustible; so that only the purest and incombustible part remains, by which such great things in Medicine and Alchymy are performed, that it refuteth all those who speak against it; although many Impostors by their cheats, from place to place, have given occasion to speak evil of the Noblest of Arts; which hath had an ill effect heretofore upon my self.

An History of the Poisonous Tayl of Common Alchymy.

Here follows a large Historical Digression of some great Abuses which the Author some time underwent, but pertaining nothing to the scope of this Treatise, I will not trouble the Reader with it.

Now concerning our secret Fire, it is not made of Coals or Wood, or other combustible Matter, but compounded of certain Fiery Waters, which burn, but not like other Fires without the Glass, but always within the Glass; wherefore *Artephius*, as the first Author of the secret Fire, useth these words. *Our Fire is Mineral, Equal, Continual, it Vapours not unless it be too much stirred up, it partakes of* Sulphur, *and is taken elsewhere than from the matter; it pulleth down all things, dissolveth, congealeth, and calcineth, it is artificial to find; it is a short way without cost, at the least with small cost; it is moist, vaprous, digestive, altering, piercing, subtile, Airy, not violent, not burning, compassing or environning, containing but one, and it is the fountain of living Water which goeth about and containeth the place, where the King and Queen bath themselves.*

This is *Artephius*'s Description of the Fire of Philosophers. *Pontanus* hath also wrote of this Fire, to whose Epistle I refer the Reader for the more easie introduction to it.

Artephius hath here plainly enough described the Matter, and the *Mercurial* Water, and *Pontanus* hath confirmed it. He to whom God will give it, will easily comprehend it; but *Artephius* and *Pontanus* teach nothing, but how to ripen the Stone of Philosophers compounded of Gold, Silver, and *Antimony*, by this secret Fire. But because several others as well universal as particular are to be easily prepared by this our Fire, I think fit to say somewhat of it. Our Fire maturates whatsoever is put to it, whether Vegetables, Animals, or Minerals, and therefore our Fire, as also the Matter of the Philosophers Stone it self, is called Vegetable, Animal, and Mineral; as also a natutural, non-natural, and supernatural Fire. He who is not satisfied with this may read *Artephius* himself, where he will find more of this our secret Fire.

Now having understood what *Artephius* and *Pontanus* have written of our secret Fire, I could not but describe it somewhat more openly, to shew the Artist a nearer and easier way to obtain it. I *Glauber* can truly affirm this, That in my young days I have travelled many Countries, and diligently searched for an Experienced Philosopher, that might teach me some good. But I no where found my desire, but I often found some diligent Physician, who following *Crollius*, *Hartman*, *Beguinus*, and other Experienced Physicians, prepared their own Medicines, by which they gained Honour and Wealth, and were therewith content. Some of them had indeed read *Artephius* and *Pontanus*, but had not light enough to understand them. I have also endeavoured to frequent the elaboratories of Princes, to learn something there. Indeed I found Processes enough there, which were sent from great Men. By following of which, and working in *Arsenick*, *Orpiment*, *Cobolt*, *Cinabar*, *Mercury* and the like Minerals, I drew a great deal of Poison into my Body, till at length I grew weary of it, and therefore set my mind upon *Spagyrick* Medicines, by which I have found many curious Secrets, and gain'd a sufficient Livelyhood. But yet at the same time, I attentively read the Writings of the Philosophers, and out of them learned many good things, chiefly *Basilius*, *Bracescus*, *Neusementius*, and the like good Authors; but the secret Fire of *Artephius*, or the proper Agent, I could not Learn, I have often Discoursed of it with Learned men, but always found, that they understood less of it than my self. For they had not read the Ancient Philosophers, but had spent their time in getting of Money, and sending their Receipts to the Apothecareis Shops. But after a light was enkindled in me from above, and I began to know this secret Fire, I began to have an aversion to the tedious, and troublesome work with Glasses, therefore I set it all aside, and now find my self more at ease, by this Capital work, for I make no further use of Furnaces, Glasses, or Coals, but can now do

more and greater things in half a Nutſhell or Egg-ſhell, than I could before, with all my Furnaces, Glaſſes and Coals, for which I give inceſſant thanks to God, who is the giver of all Good. This I was willing to add, *viz.* that our Fire is hard to be found, but eaſie to be made, when known. Concerning the Matter, it is not always the ſame, but may be taken after ſeveral ways, yet according to the true proportion of the Fire, for this is all in all, the proper Agent muſt be only excited by our Fire, and carried on to the promoting of the Maturation of our Matter; for the proper Agent is here as much concerned, as the fire it ſelf, for that alone could not work ſufficiently to prepare an unripe Mineral by it ſelf, without the help of the proper Agent, in ſo ſhort a time, into a Tincture conſtant in the Fire, or univerſal Medicine. Now whoever hath a mind to do any thing with our ſecret Fire, muſt have conſtancy of mind, tarry at home, and beg aſſiſtance of God, whoſe Bleſſing he muſt wait for with Patience.

Now concerning the farther uſe of our ſecret Fire, it is thus, that all Vegetables, as Herbs, Roots, Seeds, Woods, *&c.* and all Animals, none excepted, together with all Minerals and Metals, may without Coſt, be eaſily brought into excellent Medicaments, particularly. For our Fire *Maturates* the pureſt *Anima*, or Quint-eſſence of all things. Poyſonous Subjects are converted into Medicine, ſowr and bitter into pleaſant and ſweet. The immature is ripened; and our Fire can be better compared with nothing, than with the Sun, which gives Life to all Vegetables, Animals, and Minerals, and makes the imperfect, perfect, nothing excepted. In fine, Our Fire is the greateſt and moſt noble in the World, the Sun excepted: But God is above all, the Lord of the Creation. But what need I ſay much of the Melioration of Vegetables, Animals and Minerals, by our ſecret Fire, I have ſaid enough, if I ſhould ſay more, it would render it too Common.

But thus much it will be neceſſary to add, *viz.* what the Subjects are, which are the moſt eaſily wrought upon by our Fire. Among Vegetables, Wine, and what pertains to it is the beſt; Among Minerals, *Antimony* and *Mercury*, which is our living Gold; Among Animals, Man, and what appertains to him. You have your own choice to chuſe, which you will, you have ſufficient Advice, and want nothing more, but the Bleſſing of God, without which all is in vain.

Here followeth the Compoſition, or Preparation of our ſecret Fire.

Three Heatheniſh Deities command this our ſecret Fire, *viz.* *Apollo*, *Diana* and *Pluto*. *Apollo* affords the warm Sun-ſhine. *Diana* gives the cooling and refreſhing Night. And *Pluto* gives his Fiery Helliſh Rain. That you may better underſtand it, *Apollo* gives Wine three times, *Diana* Milk twice, and *Pluto* his Helliſh Fire once. Out of theſe three Gifts, our Fire is prepared. This is the true Preparation of our wonderful Fire. To ſpeak of this more amply, is not convenient; we muſt not caſt Pears before Swine, which way this Fire is to be uſed to any Subject, is ſufficiently diſcovered to a Man thereunto elected by God. But there are many, who having no dependency upon God's Bleſſing, proceed after an evil and cheating manner, ſo that thoſe *Alchymiſts*, or Gold-makers, are become a ſcorn to the Country, and no Man cares to dwell by them, leſt their great and continual Fires ſhould bring damage to his Neighbours, and this not without reaſon. For in making Oyl of *Vitriol* after the common way, a Fire is kept ordinarily for forty or fifty hours, which is a very tedious Work; but the Adepts can force over a Pound of Oyl of *Vitriol* in an hours time, with very few Coals, which thing I have already touched in my Writings, and ſhall ſay more of it in my Second Appendix. I have recommended this compendious way of making Oyl of *Vitriol* and *Sulphur*, to ſome Men; but they adhered ſo cloſe to their old lingring way, that they were regardleſs of a better, notwithſtanding that the Oyl of *Vitriol*, and the *Acidum* of *Sulphur*, are the Baſis or Foundation of all the common *Hermetick* Medicine, for all other Mineral Spirits are by them acquired eaſily and plentifully. That Mineral *Acid* which is plentifully found in *Vitriol* and *Sulphur*, is the only Agent whereby Nature *Maturates* the yet volatile and unripe Minerals in the Earth. And alſo all Tinctures, which are fixed and conſtant in the Fire, are by the hand of the *Artiſt* prepared by this, yet with the Addition of its Compeer, the external Fire. This univerſal *Acidum* is our Horſe-dung, and the *Stygian* water, in which *Jaſon* drowned his Dragon and made him fixed: But when I here mention *Jaſon*'s Dragon, it comes into my mind what happened to me, when I once attempted to make ſuch a Dragon, which vomited out Fire, and a black poyſonous Smoke, out of *Sulphur* and *Salt-peter*: And becauſe this Hiſtory, may ſerve as a warning to many, who may incur much danger oftentimes by the common *Alchymy*, I will here inſert it. A little before I became Bed-ridden, I had undertaken to ſteal from the ever watchful Dragon, that Golden *Fleece* which he hath in his keeping, and becauſe this fierce Dragon will part with nothing before he be half ſlain, or at leaſt, laid to ſleep, therefore I was buſied in this work, and had made a mixture of *Sulphur*, *Niter* and *Tartar*, and alſo another of *Salter-peter*, *Antimony* and *Tartar*, each apart in an Earthen Pot, in order to Fire them for Detonation. And although I had ordered, that one Pot ſhould firſt be detonated, and then the other, that the Smoke might not be too great, yet this was not done, but they were fired both together, which cauſed ſuch a great, black and ſtinking Smoke to aſcend the Chimney, that when the Neighbours ſaw it, they thought the Houſe had been on fire, and cryed out, Fire, knocked at my Door, to come in to quench it, when there was none, notwithſtanding this was not done in my dwelling Houſe, but in a Houſe remote from all others, ſo that it could have done no hurt to any elſe, if it had been burnt down, but they not being ſatisfied got Ladders and looked down the Chimney, and ſeeing no Fire there, they then ſaid, it was Witchcraft. Out of this Hiſtory, one may ſee what a dangerous Toyl the common *Alchymy* hath. This work to kill the Dragoon, and to ſpoyl him of his Golden *Fleece*, is one of the pleaſanteſt that ever I did in *Alchymy*, except the ſecret Fire. For when the *Sulphur*, *Salt-peter*, *Antimony* and *Tartar*, are denotated together, and ſublimed with *Sal Armoniack*, the Golden *Fleece* riſeth in a curious Golden Colour, and tingeth the Head, and Receiver with all ſorts of Colours, like unto the Rain-bow, or a Peacocks Tail, and alſo one ſees the Foot-ſteps of the ſcaly Dragon moſt gloriouſly in the Head; which *Neuſementius* hath excellently deſcribed, in a few *French* Verſes. and hath omitted almoſt nothing which belongs to this Work: And becauſe I here write of this ſort of Work, it will not be amiſs, to add thoſe Verſes. Concerning this, *Medea* thus exhorts *Jaſon* in *Ovid*.

Pervigil

Pervigil ecce Draco, ſquamis crepitantibus horrens,
Sibilat & torto pectore verrit humum.

Which *Neuſementius* hath thus rendred into *French.*

Voy le Dragon veillant de fureur forcenè
Qui d'eſcaille bruyante a le corps entournè
Dont le goſier ſifflant fumeè & feu deſerre
Et qui par replis tors va baliant la terre
De ſa large poitrine en la poudre imprimant
Les ſinueux ſillons, qu'il trace inceſſament.

And may thus again be put into *Latine.*

Adſpice ſquamoſum tumidumq; furore Draconem
Semper in excubias aures frontemque minacem
Vibrantem, & nullo claudentem lumina ſomno
Qui criſta linguiſq; tribus præſignis, & uncis
Dentibus horrendis, patulo de gutture Flammas
Sibilat, & fumis atratis inficit auras.
Adſpice multiplices Gyros quos ponderè Caudæ
Inſinuat Terræ, cum longa volumina ducit
Perque ſuperficiem reptat, cum pectore lato
Verrit humum, relegens eadem veſtigia ſemper.

And in *Engliſh* may ſound thus,

Behold this ſcaly Dragon ſwel'd with Ire,
His Creſt doth brandiſh, with a dreadful Brow;
Nere cloſeth Eyes, nor Ears, nor yet retires
From diſmal noiſe, and horid Teeth to ſhew:
From his broad Throat flames iſſue out
Black fumes infect the Air about.
Behold the Rings, which his encircled Tail
Caſts on the Earth, whilſt he doth form his Coil;
With his broad Breaſt he creeps upon its Face
Sweeping the ground, always in the ſame Trace.

Here in few words the Philoſopher deſcribes the whole Work, how to ſpoyl the Dragon of his Golden *Fleece.* But only to thoſe, who eaſily underſtand theſe Verſes, whoſe eyes God hath opened, and are already pretty well skilled in this Art. But to the unexpert all remains dark. Reading only will not do it, but you muſt put your hand to the Work, if you will attain to any thing. I have, for ſeveral years together, read, ſought, and laboured in vain, before I found the right way of obtaining this Golden *Fleece.* And when at length I became Maſter of this Art, I could not but admire that it was ſo eaſie a thing, and yet ſo difficult to be learned out of Books. *Paracelſus* and *Neuſementius* write the plaineſt of this, of which two expert Men, I firſt learned this Art, but afterwards I found a more Compendious way, ſo that I can now perform the whole Work, with the Charge of one Ducat [or ten Shillings] in a very ſhort time. But I muſt leave it to others to do, being yet detained in my Bed by my ſickneſs: So that I can do no more, than to ſhew to others by my Writings and Inſtructions, the ready way to the Land of Promiſe.

Of the Second Fire, and its marvellous Fire-ſtone, which is generated by it.

We know, that Fire generates Stones, every one according to its Nature. The ſecret Fire of the Philoſophers, engenders the Philoſophers Stone, which is a univerſal Medicine for Men and Metals, as we have already heard. That the Meteorical fire, from whence proceeds Lightening and Thunder, generates alſo Stones, is known to all, for the Air procreates the ſame things, which are found upon the Earth. Therefore *Hermes* in his *Smaragdine* Table hath very well ſaid, That whatſoever is beneath is alſo above, and what is above, is alſo beneath, by which, marvellous things are done. We know, that Frogs and Graſhoppers and the like, which are procreated in the Air, have fallen down with the Rain. I have read in a certain Hiſtorian, that once a Calf fell down with the Rain.

Anaxagoras, a famous Philoſopher, prognoſticated in his Life-time, that after he was dead, a great Stone ſhould fall down from the Air, to the Earth, which alſo came to paſs. We alſo know, that ſometimes great pieces of Iron have fallen down, not compact, but ſticking one part to another like drops. And alſo, every Body knows, that Stones are caſt down by Thunder and Lightening, which Stones are formed and concentrated by the Lightening, and ſo have aſſumed the Nature of a Stone; for in the Lightening is hid a very miraculous Property; ſeeing that Lightening is a Fire of quite another Nature, than our common Fire, which breaks in pieces all hard things which reſiſt, but toucheth not what maketh no reſiſtance. It hath very often happened, that the Lightening hath broken a Mans Bones, without hurting his fleſh. We have alſo known, that it hath melted the Sword in the Scabbard, and left the Scabbard whole. This Stone generated by Lightening, hath quite another Nature than common Stones, for it is not tranſparent like a Pebble or Sand-ſtone, which melt in the Fire. Neither hath it the Nature of tranſparent and hard Gems, which do not melt in the fire, and yet keep their Luſtre, neither can the fire reduce it into Lime, as it doth a Chalk-ſtone. In a word, it can be compared with no Stone in the World. Its ſhape is alſo wonderful, for it is generally ſharp at both ends, but yet they are not all of one Figure or ſhape, they are generally ſmooth on the outſide, and of a milky Colour, and reddiſh within. I have one which is Triangular like a Star, and if you turn it, 'tis like a Heart, of which I never ſaw the like. I have alſo one which is Cole-black, which is rough both within and without, it is a wonder to me, that this Stone will not ſtrike fire with Steel, notwithſtanding it is generated by fire. We may alſo by Art make Lightening out of Iron or Steel, in which alſo is generated a ſtrange Stone. The Thunderbolts love all things which are combuſtible, eſpecially Gun-powder, for the Lightening it ſelf proceeds from *Saltpeter* and *Sulphur*, and that is the reaſon, why it ſo often ſtrikes into Towers, where Gun-powder is kept, and alſo it uſeth to ſtrike Old Oak Trees, which contain *Sulphur* and *Saltpeter*, alſo upon Church Steeples, but ſeldomer in the open Fields. I once ſaw in *Germany*, where the Thunder had ſtroke a Tower of Gun-powder, and although it was four ſquare, yet it run ſo about it, and took out a piece of Stone-work all round, as if it had been cut out with Tools, becauſe it could no where find entrance. Strange things are done by Lightning, it ſometimes killing the Horſe, and not hurting his Rider, and again killing the Rider, and not hurting the Horſe, becauſe it is no common Fire, but a concentrated Meteorical fire: It hath no reſemblance of the fire of the Sun, much leſs of our common Fire, but our ſecret Fire of the *Chaldeans* hath ſome Agreement with it, becauſe it is made of Iron or Steel, and *Saltpeter*: Therefore it cannot be much unlike the fire of Lightening, for that is alſo generated

generated out of *Saltpeter* concentrated, and *Sulphur*. Steel is concentrated *Sulphur*, that hath alſo Power to concentrate *Saltpeter*, and ſo to generate this marvellous Fire. The Meteorical Thunder-fire is a terrible one, but our Steel-fire *is* more wonderful in its Eſſence and Operation, as we ſhall heer by and by, for incredible things are wrought by it, ſo that even the Stone of Philoſophers, never ſo well prepared, is not to be compared with it. *Query*, whether this Thunderbolt which is caſt down by the Lightening be of any Virtue, or whether it be a dead and unprofitable Stone? I anſwer: It hath been always reputed, that if a Thunderbolt be kept in any houſe or place, the Thunder and Lightening will never ſtrike into it. Whether this be true, I cannot tell, yet this I know, that thoſe who keep them eſteem them highly, I my ſelf have one, which I much eſteem for its marvellous Figure, for turn it which way you will, it always repreſents a Star or a Heart. Many ſtrange things are performed by this Thunderbolt. I have ſeen ſeveral Foreſters break it into pieces of the bigneſs of a Pea, which they put into a Bullet-mold, fill'd up the Mold with melted Lead, and did believe, that they could not miſs any wild Beaſt at which they ſhould ſhoot it. I have alſo ſeen ſome Souldiers make ſuch Bullets, and formerly believed, that they could pierce any thing with them, that otherwiſe they could not ſhoot through. I have alſo ſeen others, who have put pieces of this Stone into the pummels of their Swords, and believed, that this took away their Adverſaries Courage when they ſhould encounter them, and ſo they might eaſily Conquer them. Theſe and the like things, I have ſeen done with it. But whether this be ſo or no, it is probable that there ſhould be ſome ocult Virtues in thoſe Stones. For ſeeing that all Stones are good for ſomewhat, why ſhould this marvellous Thunderbolt only be good for nothing? Some cauſe Women in Labour to hold theſe Stones in their hands, to facilitate their Labour; they alſo ſay, that it encreaſeth Womens milk, if it be put into their drink. Others put them into the hand to ſtop Blood. If one could do any good with it, one might eaſily, by the help of a certain Magnet, attract a great many of them from the Air, as you ſhall hear anon. Now again, to return to our Fire and Fire-ſtone, I affirm for truth, that our ſecret Fire and Fire-ſtone, in its Eſſence and Efficacy, is more wonderful than the Meteorick Lightning and Thunderbolt. For our Fire doth not burn or flame, but when we will have it, otherwiſe it is like a dead Black-ſtone, if you only keep the Air from it, it will remain a Stone as long as you pleaſe. If you put it into a Glaſs and ſtop it very cloſe, and keep it under water never ſo many years, it will ſtill remain Fire, and not be hurt. For our *Chaldaick* Fire, when once prepared, will not burn, but remain good for ever, if you keep it from Air and Water. It is ſufficiently known, that the ancient Heathens put burning Lamps into their Vaults, of which Lamps I have ſeen many, that were digged out of Mines in *Colen*. Some of theſe Lamps were found in ſome burying Vaults burning, when they were firſt opened, but as ſoon as the Air touched them went out. But our *Chaldaick* Fire remains dead, when kept cloſe, and is kindled by the Air. I call it dead, but it is rather a dormant Fire. This our ſecret Fire hath ſo ſtrange a Property, that it is able at all times to attract Fire out of the Air, not only in the hot Summer, but alſo in the cold Winter Nights, when the Sun is fartheſt off. By the help of this Fire, I believe, I could at certain times light a Candle, either under or above the Earth. The *Maccabees* ſet their Sacrifice on Fire by this, and not with common Wood, or Coal, fire, as the Veſtal Virgins in *Rome* were forced to feed it with Wood continually, that it might not go out; if by chance or neglect it went out, thoſe Virgins were buried alive; in ſo great eſteem, had the *Jews* and the Heathens, their Fires.

Now as for the uſe of our ſecret Fire, no Man may be ſo bold as to diſcover the Power thereof to the World, for things incredible are to be done by it, which are better to be concealed, than made publick: Yet I will a little touch at it. The ſecret Fire of it ſelf is of no uſe in Phyſick, but great Secrets may be prepared by it, both in Medicine and *Alchimy*. Firſt, out of our fiery Maſs may be driven a living *Mercury* of *Mars*, which is the moſt noble Subject to prepare an extenſive Tincture, both for Men and Metals, for of all *Mercuries* of Metals, this is the beſt. When our Fire is melted into a thick water, and this fiery water poured upon a ſubtil Calx of Gold, and digeſted with it, it will attract the yellow Colour from the Gold, and leave it white, yet the Tincture is not yellow, but as green as Graſs, out of which an excellent Medicine may be made; it is alſo profitable in *Alchimy*. For it is alſo of this Nature, that if you put a Solution of Gold and Silver into it, they will be joyned together without Ptecipitation, which is not uſual to be done. One may alſo ſquirt this fiery water, by peculiar Springs, to a great diſtance, and thereby fire any Combuſtible matter. If you will, you may alſo ſhoot this our Fire in a dry form, out of great and ſmall Guns, to fire any thing with it. I believe, that by the help of this, one might fire a great Canon under water, by which you may fright Fiſh up to the Surface of the water in deep Ponds, ſo that you may catch them with ſmall Nets. One may alſo drive away all hurtful wild Beaſts, as Bears, Wolves, Foxes, nay even Lyons, Tygers and Dragons, out of the Wilderneſs. One may alſo drive away High-way-Men, Murtherers out of their Ambuſcades, and catch them. In a word, many ſtrange things may be done with it, which for certain Reaſons I dare not mention. The greateſt and the beſt thing that may be done by this ſecret Fire, is the preparing of the *Mercury* of *Mars*, as alſo after a Magnetical manner to draw the Lightning which way one pleaſe. I have had this Fire now for above twenty years, and durſt not own that I had ſuch a thing, now I am near my end, I was willing to let it be known, that there is ſuch a Fire in Nature. If I did not fear, that malicious Men would abuſe this ſecret Wonder-fire, I would have been plainer, but the time is not yet come for the doing thoſe great things, but when *Elias* the *Artiſt* ſhall come, he will not fear to make great Alterations in the World, by the help of this Fire. He will eſtabliſh much good, and aboliſh all that is evil, but I have ſaid enough of this at this time. I have indeed told you here that it will be done, I do not deſire, neither ſhall I live till it ſhall come to paſs, for ſuch great Changes will not be made with eaſe, but with great Zeal. God preſerve the Pious, and ſhew them a way over the Mountains, where they may live ſecure from this *Sodomitiſh* Fire, *Amen*.

Of the Third ſecret Fire, and the wonderful Stone that is engendered by it.

That pious Philoſopher *Baſil Valentine*, in his Triumphant Chariot of *Antimony*, teacheth, how to prepare a Stone by Diſtillation and Rectification ou

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of the pureſt part of *Antimony*, and calls it the *Stone of Fire*, becauſe this Stone is prepared by Fire out of fiery Subjects: And alſo becauſe it expelleth all Diſeaſes from the Body of Man, and conſumeth them as common Fire doth Wood. He alſo ſaith, that this Fire-ſtone can tranſmute Silver into Gold, although in a ſmall quantity. The highly experienced Philoſopher *Helmont*, makes mention of almoſt ſuch a Stone, which he ſaith, he ſaw in *England* with one *Butler*, and tells of wonderful things that the ſaid *Butler* did with it. Now by reaſon of my diligent ſearch into Nature and the Bleſſing of God, ſuch a Stone hath fallen into my hands, with which I can do the ſame things in Phyſick and Alchimy, which *Baſil Valentine* aſcribes to his Fire-ſtone, and *Helmont* to *Butlers* Stone: I could not but leave to poſterity, that it is poſſible to prepare this Stone out of *Antimony*. The Art conſiſts in this, that you firſt bring the *Antimony* by Sublimation, Diſtillation and Rectification to the greateſt Subtilty, and afterwards again concentrate this ſubtil Spirit into a hard Stone, which Stone when it is not fixed (being then uſeful in Medicine) is of a reddiſh Colour, and eaſily melted, and penetrates all Bodies. But if by it you would graduate Silver into Gold, you muſt firſt fix it, to abide the *Cupel*, but being once fixed, it will not then perform in Medicine what it would before. It is worth much more, when unfixed to be uſed in Phyſick, than when it is fixed for the tinging of Silver. For the health of Men is more precious than Gold or Silver. And with an univerſal Medicine, that will Cure all internal and external Diſeaſes, you may get Gold and Silver enough. I have at this preſent time, but a very little of this Stone left, but am reſolved in a little time to make a good quantity of it, that I may therewith ſerve my ſick Neighbours. For it works ſtrange things as you ſhall hereafter hear. This our Stone is ſo powerful in its working, that we dare not give it in ſubſtance, for one Grain of it ſerves for twenty Doſes or more, and each of them hath power to expel from the Body whatſoever is hurtful. This Medicine opens all Obſtructions, and you ſhall hardly find any other comparable to it. The beſt way to uſe it is to keep it whole, and not to powder it, and then it is fit to be uſed both inwardly and outwardly. If you will uſe it inwardly, then put a few bits of it into a Glaſs, and pour Spirit of Wine upon it, in which a little Sugar is diſſolved, and ſo let it ſtand till you have occaſion for it. If you will purge any Body with it, you muſt put a few drops of it into a ſpoonful of Wine or Beer, or any other Liquor, and give it to the Patient, and order him to be kept warm, then the Medicine will work in his Body, like fire upon Wood, and conſume whatever impeded his health, and drive it out by all the Emunctories, *viz.* by Vomit, Stool, Sweat, Urine and Spitting, and leaves no impurity in the Body, and ſo it expels all Fevers and Agues, however diſtinguiſhed. It alſo cures the Plague, Leproſie, Gout, the falling Sickneſs in young and old. It takes away all obſtructions of the Body, *viz.* of the Liver, Spleen, and Lungs, it expels all ill Humours, contained in the Cavity of the *Thorax* and all other parts of the Body. This our Stone alſo opens the Obſtructions of the Meſentery, carries off all Slime, and Salt watry Humidities. It cleanſeth the Stomach and Guts from all pituitous and bilious Slime. It alſo draws all hurtful Humours out of the Brain, takes away noiſe in the Ears, Comforts the hearing and ſight, takes away every Toothach in a moment, faſtens looſe Teeth, and hinders their fouling. It takes away all the Vices of the Throat, Mouth and Tongue, and ſuffers no uncleanneſs or foulneſs to abide thee. It is a pitty to ſee that no Phyſician hath a Remedy for the Toothach, but either pulling them out, or ſtopping them when hollow with *Narcoticks* or hot Oyls, which are indeed no cure: Now foraſmuch as this Diſeaſe troubles People of all Ages, and few know any Remedy for it, I think it neceſſary to ſet down a never failing Cure. 'Tis true, moſt Toothachs may be put off by Purging, and need not ſo painful a Cure, as drawing. Out of Pity to thoſe, who are troubled with the Toothach from their infancy, I here declare the Remedy. ℞. Of our Fire-ſtone, as much as a Pea, and put it into your Mouth, with half a Spoonful of Wine, keep it in your Mouth as long as you can, or ſo long till the Stone hath drawn your Mouth full of Rheume, then ſpit it out, and again put the Stone into your Mouth, with as much Wine as before, and keep it there till your Mouth is again fill'd with Rhume, then again ſpit it out, and continue doing this ſo long, till you have ſpit out half a Pint of Rhuemy Spittle, not reckoning the Wine. The next day again draw out the ſame quantity; do this every Morning faſting ſo long, till no ſlimy matter, but only a clear inſipid water comes out, which is a certain ſign that your Head and Brain is freed from all ſuperfluous Moiſture. When this is done, for a great while you will be free from all noxious Rhumes, or Salt defluxions, which fall from the Head to the Teeth, and there cauſe pain. This our Fire-ſtone doth not only draw all noxious Humours from the Head, but alſo out of the Stomack, Lungs, Liver and Spleen, and carries them out of the Body, by the Mouth, as well or better than any common Purge. But if the Body ſhould be too full of ill Humours, ſo that our Fire-ſtone, ſhould not be able to draw them all out that way, then you muſt take ſome of it inwardly extracted as before mentioned. But becauſe this our Stone is yet unfixed, and therefore ſometime cauſeth Vomits, and ſome are not able to bear Vomiting, therefore you may prevent it, by putting diſtilled Vinegar with Sugar upon the Stone, inſtead of Brandy, and ſo extract it, and this Extract will cauſe no Vomits, but only work by Stool: This is enough to be ſaid for the Cure of the Toothach. But if Parents were ſufficiently knowing, and careful of their Children, they might in their Childhood prevent the greateſt part of this Miſchef, by cauſing them daily to waſh their Mouths, and behind their Ears, with cold water. But in thoſe who are come to Maturity, our Fire-ſtone is the beſt of Remedies and never fails. It alſo cures the Scurvy in the Mouth, when little hot Pimples appear, and the decay or waſhing of the Gums. This Stone being held in the Mouth with Wine, alſo preſerves Old Men from Apoplexies, Catarrhs, and the like. Let this ſuffice to be ſpoken concerning the Virtues of our Fire-ſtone, in the curing of internal Diſeaſes. But becauſe the Variety of Diſtempers is great, I will there ſet down the true way of uſing it, that none may err in its Application.

Of the true uſe of this Medicine in Diſeaſes.

In all Fevers or Agues, let them be Quotidians, Tertans or Quartians, you muſt always give our Medicine two hours before the fit, and keep the Patient from the cold Air. In the Plague, Pleuriſie and other hot Fevers, you muſt not delay the uſing of this Medicine, but as ſoon the Patient is taken, give him a Doſe of our Medicine, let it work with him in a warm Room. And if the Diſeaſe abate not, give him

the next day another Doſe more or leſs, according to the condition of the Diſeaſe and the Patient. And you muſt beware of Bleeding, if the Patient be ſtrong enough to endure a Purge, but if the Patient ſhould not have ſufficient ſtrength, and yet the heat encreaſe, then you may abate the heat by taking away a little Blood, but not too much, that the ſtrength may not be exhauſted with the Blood, and the evil yet remain in his Body, for by Purging, only that which is hurtful is expelled, and the good remains.

In the Epilepſie, you muſt uſe this Medicine only every other, or every Third day, as long as there ſhall be occaſion.

In the Stone of the Kidneys and Bladder, once in a Fortnight.

In the Dropſie, once a Week.

In the Cholick, once after you have uſed a Clyſter.

In the Leproſie, once a Week.

In the Gout of all ſorts, once in three or four Days, until the pain is gone.

In Obſtructions of the Lungs, Liver, Spleen and Meſentery, once or twice one after another.

In the Venereal Diſeaſe, you muſt uſe it every Third day, and Sweat between whiles, till the Diſeaſe is gone.

In the *Hyrocondriack* Melancholy, Scurvy and the like Diſtempers, which proceed from Salt and Cholerick Blood, you muſt take a Doſe every Third day, till the Diſeaſe is gone.

In all ſorts of Scabs and impurity of the Skin, which proceed from watery Blood, you muſt take it once or twice, and apply outwardly a fixed white *Sulphur*.

In the Dyſentery or Bloody Flux, uſe it but once and it ſtays the Flux.

Of the outward Uſe of our Fire-Stone.

If our Antimonial Fire-ſtone be boyled for ſome hours in Sallad-oyl, it draws out of it many Virtues, ſo that being only outwardly applyed, it doth much good in Phyſick. The Oyl becomes red in the boyling, and if it doth not ſo, it is a ſign, that it hath not been well boyled, but if it be well done, it will do what I here ſay. Firſt, this Oyl is good to heal all freſh Wounds, and old Sores, if you dip Pledgets in it, and lay them thereon, and ſo keep it from the Air with a Plaiſter of Wax. It alſo cures all Bruiſes, being anointed with it, or a Cloth dipt in it, and laid over the Bruiſe. A little Cotton being dipt in it, and applyed to the Navel with a Nutſhel, purgeth thoſe, who are eaſily moved, as well, as if they had taken it inwardly: And if being ſo applyed, it ſhould not work with Men, that are not eaſily moved, you may inject a Dram of it Clyſterwiſe by a Syringe, and then it will open the Body, and carry all ſlime and filth from the Guts, and is certainly the beſt Remedy in the World againſt the Cholick. For it doth not only draw what is bad out of the thick Guts, as Clyſters do, but alſo out of the ſmall Guts, yea even out of the Stomach, to the eaſe and admiration of the Patient. This Oyl alſo applied to the Navel and Clyſterwiſe, immediately helps Women, who are troubled with the *Suffocation* of the Matrix, for which Diſeaſe the World cannot afford a better Remedy. And without doubt this Oyl hath many more Virtues than I yet know, but time will diſcover them; for I have not had it long, but am reſolved to have a good quantity of it made to ſerve the Sick: And no doubt, but in a ſhort time this high Medicine of the Stone and Oyl, will be known to all *Europe*. For it will far outdoe the whole *Galenick Apparatus* of Medicine. Certainly thoſe Phyſicians, who ſerve in Armies, ſhould not be without this incomparable Medicine, which is of ſo ſmall Carriage, and doth ſo great things. For one Ounce of this will make at the leaſt a Touſand Doſes, and ſo by conſequence many may be cured by it. If every *Chyrurgian* in an Army, ſhould have but half an Ounce of this Stone, for inward uſe, and ſome Ounces of the Red Balſome, for outward uſe, the Lives of many Souldiers would be ſaved, which for want of it muſt dye. The threatning of Armies is already over our Heads. God ſend us what is good for our Souls, and preſerve the Pious from evil. And ſo we end this Book of the *Fire-ſtones*. If it pleaſe God, the Seventh part of the Proſperity of *Germany* ſhall ſhortly follow.

De

De Purgatorio Philoſophorum:

OR,

A TREATISE concerning the Purifying Fire of the Wiſe Men.

With which, the Philoſophers cleanſe their Mineral, Animal, *and* Vegetable *Subjects, and exalt them to the higheſt degree of Purity, in order to prepare* Univerſal Medicaments *from them, for the Bodies of Men and Metals.*

Which Purgatory Fire is Called Yſopaica, *by the ancient Philoſophers, that is, to ſay, the Art of waſhing with Fire.*

Together, with a ſubjoyned inſtruction, how, by means of the Salt of the World, out of all Metals and Minerals, a living Mercury *may in quantity be prepared.*

From the High-Dutch *faithfully Tranſlated into* Engliſh.

Reader,

IF any wonder at the Title of this little Book, let them know, it agrees very well with the Matter it treats of, foraſmuch as all things that are cleanſed with Fire, may truly be ſaid to be purified by means of a Purgatory. There are indeed beſides this, many other ways of cleanſing as by Water, Lye, Soap, and other moiſt things; but that way cannot properly be called a Purgatory, nor any other, but what is done by Fire. I intend in this Book to treat of three ſorts of Purgatories, *viz.* Firſt, of the ſecret flaming Purgatory, or cleanſing Fire of the Philoſophers, made of *Alcolized* Spirit of Wine, wherewith they purifie the Souls of Vegetables, Animals and Minerals, dignifying them thereby to enter their Heaven.

The other Purgatory God makes uſe of, to purifie his dear Children here in this Vale of Miſery, to make them abhor ſin, and fit them, after many afflictions, and torments endured, for a Tranſlation with all Saints, into his heavenly Kingdom, there to behold his Face to all Eternity.

The Third Purgatory is, that of which the *Chriſtians* of old have Writ, and is to this day ſtill believed by the Church of *Rome*, *viz.* that the Souls of the deceaſed, when by the guilt of deadly ſins, they are not immediately ſunk down into the eternal Helliſh Pains, are in this Purgatory cleanſed of the pardonable ſins they have committed in this Life, and are made worthy to enter into eternal Joy and Salvation.

Now what this Purgatory is, which no Perſon living is able to give an experimental and true grounded Account of, we will, if it pleaſe God, a little enquire into, after that we have firſt expoſed to view, and unanſwerably aſſerted the truth of the two foregoing Purgatories, which our eyes have ſeen, and our hands have handled.

Concerning the Firſt Purgatory.

The Firſt Purgatory, or cleanſing Fire of the Philoſophers, with which they prepare their Univerſal and particular Medicines for Cure of all Subjects of the the three Kingdoms of the World, hath been moſt carefully concealed by them. I have indeed formerly, of Friendſhip and Goodwill, revealed this Fire, with its moſt profitable Uſe, to ſome Perſons, by which means others unworthy have began to perceive ſomething of it, and uſed their utmoſt endeavours to attain the full knowledge of this high Secret, and have ſo far ſucceeded, as to underſtand it in part, *viz.* the Uſe of common Spirit of Wine, which is a conſiderable ingredient of the ſaid Philoſophick Purgatory Fire.

But after all their ſerching, they never attained the knowledge of the *Salt* of Art, by which the Spirit of Wine is *Alcolized*, which is the beſt and chief ingredient of this Fire. Foraſmuch then, as the Spirit of Wine is thus known, and will probably yet further be divulged; I have thought good to publiſh it my ſelf, and to communicate the Secret to all. But as for the ſecret *Salt* of Art, whereby the Spirit of Wine is acuated and fortified, and is the proper Agent for Meliorating of Vegetables, Animals and Minerals, and whereby they are brought to the higheſt degree of Purity, none hitherto have been able to entice it from me,

and

and I trust that for time to come I shall be more cautious of communicating ought to false and wicked Men.

Let no Man therefore imagine Spirit of Wine to be the secret Fire of *Artephius*, whereby some Minerals and Metals, without any foregoing separation of the pure from the impure, may without any diminution of their weight be changed into a mere pure Tincture. No in no wise, for no Spirit of Wine hath any such power. But as for what simple Spirit of Wine is able to perform, that we will here declare, and no more at this time. I doubt not but many will persuade themselves, that in having the Spirit of Wine, they are Masters of the whole Secret; but that's a great mistake, he that questions it, let him read *Artephius*, *Pontanus*, and some few others who write of it, and he will find that a simple Spirit of Wine hath no resemblance with the Fire of *Artephius*.

For the Philosophers who write of it tell us, that their Fire *acts as a proper Agent on its Patient, with an invisible Flame, continually, equally in one and the same degree, and at last changes it into pure Tincture.* Which things cannot be said of Spirit of Wine, which doth not burn continually, equally, or invisibly, from whence it is apparent, that Spirit of Wine is not the Fire of *Artephius*, nor can be compared with it.

Now what this Fire of *Artephius* is, has been sufficiently declared by me, in my Treatise *of the Threefold Fire*, and therefore unneceffary to write more of it here. It remains only for me to declare, how Vegetables, Animals, and Minerals with the help of any burning Spirit, not only that of Wine, but of Corn, Honey, Fruits, Leaves or Gras may be most highly purified, and reduc'd to the Highest Medicines.

In my little Treatise of *Elias the Artist*, I have taught at large how to bring the Essences of Metals, Stones, Vegetables and Animals over the Helm, by means of an Alcolised Spirit of Wine, and to prepare universal Medicaments from them, to which therefore I refer the Lover of Art.

And will now proceed to declare, to how good purpose Spirit of Wine may be made use of in Physick. We all know that in general there are but two ways of cleansing impure things, *viz. Water and Fire.* Now Water can only take away those defilements that are outward and superficial, not being able to pierce to the Center; whereas Fire does not only purge the outside, but even that which is in-most, separating the impure for the pure, as hath already been mention'd.

We know also, that the Flame of Fire can consume nothing but its like, *viz.* the Combustible *Sulphur*, but cannot consume the incombustible *Mercury*, nor destroy, burn, or annihilate it, the Flames serving only to meliorate and exalt it. For the *Mercury* of all things can no way better be purged than by Fire, by which though it be driven away, yet may always be found again, as being incombustible.

For *Mercury* is the best and purest of the three Principles, forasmuch as it cannot be hurt by any Elements, not by the most violent Fire, much less destroyed, because it is throughout Hemogeneal.

There are three things in the World which be incorruptible, the first of which is the *Mercury* of Vegetables, Animals and Minerals, which, when by its Enemy the Fire, it is tormented, and driven from its Body, loseth none of its Virtues, but is only purified thereby. This incombustible Soul of Vegetables, Animals and Minerals, is one of those three things in the World, which are fixed, constant, and unperishable in all trials and conflicts whatsoever.

The second thing which is constant, permanent, incorruptible and invincible is Truth, which cannot be suppress'd by any Lies or opposition whatsoever; Oppressed she may be, but not totally suppressed; for God himself is the Truth, and as God cannot be overcome, so neither can Truth.

The third and last incorruptible subject in the World, is the Immortal Soul of Man; for whatsoever Afflictions or Persecutions a good Man suffers from wicked Men, can not in the least hurt his Soul, but serve only to purifie, exalt, and enoble it. The more Gold suffers in the Fire, the better and purer it becomes, and as true it is, that the Soul by the adversities of time, becomes refined and graduated to the height of Purity, being by this Earthly Purgatory dignified and prepared for Eternal Glory.

But to return to our purpose, which is to shew that the cleansing of Vegetables, Animals and Minerals, must be performed by their own Purgatory, *viz.* a common burning Spirit. We will begin with Wine, as being a very noble Creature, and see what good thing may be had from it, by means of its own Purgatory or Cleansing Fire, which without it could never have been brought to Light.

Now to speak fundamentally of this matter, we must first of all know, that several different Spirits lie hid in Wine, which also may separately be distill'd from it. As in the first place the known burning Spirit; next that Spirit which is distill'd from Crude *Tartar*, which is of a quite different nature from that which is distill'd from Wine, or its Lees, which being kindled burns away in Flame, consuming all the *Sulphur*, leaving nothing but the incombustible *Mercury* or Essential *Salt* behind, and that in a very small quantity, but of great Virtue; whereas the Spirit of *Tartar* which is distill'd by *Retort*, though it be much more subtil and penetrative than the burning Spirit, yet will not suffer it self to be kindled or burnt away, being otherwise of great use in all Tartareous Diseases, and obstructions of the Body.

There is also an Antinephritical Spirit distill'd from the fixed *Salt* of *Tartar* with distill'd Vinegar, which afterwards suffers it self to be sublimed, and being distilled yield a very strong Spirit, of which time doth not permit to treat at present. We will only, point out to you, by what means the most glorious *Mercury* and Essential *Salt* of Wine, may most easily be obtained, and what great things may be perform'd by it in Physick.

℞. Of white *Tartar* well pulverised 1 *l. Spirit* of *Salt* 1 *l.* and half, mix these well together, and fill therewith the fourth part of a Glass Body, and pour on 3 *l.* of Spirit of Wine, lute the head on immediately, for when these two Antagonists, the Acid Crude *Tartar*, and Urinous *Salt* of *Tartar* meet, they furiously attack each other, and in their Conflict send forth a very subtil Spirit, and a glorious Essential *Salt*, which *Mercury* the Spirit of Wine when distilled carries over with it. When now this Spirit of Wine being kindled burns away, the *Mercury* or most pure Essential *Salt* is thereby loosened, and with the Flame goes over into the Receiver, where it is caught of the Phlegm, from which being separated by distillation in a Vaporous Bath 'tis fit for use. This Cælestial *Salt* of Wine is of wonderful Virtue, concerning which I have given a full account in some of my last published Writings.

Its Virtues are chiefly these; It has the Præeminence of all Medicaments whatsoever, in curing the Stone, Gout, and the like Tartarous Diseases. More-

over

over this Heavenly *Salt* penetrates the whole Body, opens all Obstructions, strengthens the Heart, Brain, and all Vital Parts; is a powerful Diaphoretick and Diuretick. Indeed any one may easily imagine, that a Quintessence of Wine, when purified by its own Purgatory, must needs exert wonderful effects, and be of great uses, in the hands of a skilful Physician; of which more hereafter.

Furthermore from Wine, by means of its own burning Spirit, may be separated an excellent Volatile *Salt*, after this manner. Dissolve the Oyl of Wine, which by distillation is got out of the Lees in a strong Spirit of Wine, so as the Oyl may be well united with the Spirit. This done, kindle the Spirit of Wine, and let it burn away under our great cooling Helm or Head, by which means the *Mercury* or *Salt* of Wine goes over with the Phlegm, and is caught by it.

In like manner out of that stinking Oil which is driven from *Tartar* by a *Retort*, and is of great virtue, (though for its loathsom scent it cannot be used) a very powerful Volatile *Salt* may be obtained, by burning away the said Oyl with a burning Spirit, which Volatile *Salt* by those Purging Flames loseth its loathsom smell, and may be made use of in Physick, as that before mentioned prepared from Wine.

According to this method of obtaining the *Mercury* of Wine, we may proceed with all other Vegetables, and separate their pure incombustible *Mercury*, by burning away their Oyls, with their own or any other burning Spirit, by which means the Volatile *Mercury* is caught.

It is to be observ'd, that all Oyls distill'd from Herbs, whose flowers resemble Stars, do yield more Volatile *Salt*, than the distill'd Oyl of other Herbs. When these Herbs cannot be had fresh and green, we may take their Seeds, which yield more Oyl and Volatile *Salt* than the Herbs themselves. In like manner all Oyls, distill'd from Seeds, afford more Volatile *Salt* than those which are forc'd from Roots, Stalks, Leaves or Wood; the Seed always abounding with more Volatile *Salt* than any other part of the Vegetable; and that because God hath placed the growing and multiplying virtue of all things in their Seeds, from whence also the same is most easily separable for the use and service of Man. In particular, the Seeds of Annis, Fennel, Dill, Carway, Cumin, Cresses, Scurvy-grass and Mustard afford much Volatile *Salt*.

So likewise all Excremental and Superfluous Egestions of Nature, such as are the Hair of Men and Beasts, the Horns and Claws of Beasts, the Excrements of Beasts and Birds, as also their Feathers, do abound with Volatile *Salt*. Amongst these we may also reckon Amber, Soot, and Smith's Coals; when the stinking Oyl of any of these is burnt away, the remaining Essential *Salt* will procure the Physicians praise and honour, and the Patient's help and ease.

The Seeds of Henbane and Tobacco do yield a very powerful *Salt*; so likewise do the distill'd Oyls of Spices, as well as those made by Expression afford a most excellent Volatile *Salt* being burnt away, by means of a burning Spirit, united with them. Yet would not I counsel any to burn away such precious Oyls, forasmuch as we have other Subjects, which cost us nothing, and yet yield a better *Salt* than any Spices whatsoever; for Minerals and Metals, when without a Corrosive they are brought into a strong Spirit of Wine, yield a much better *Mercury*, wherein all the virtues of Vegetables are concentred; and consequently are far more efficacious than any Vegetable *Salt* against all Diseases whether of Men or Metals.

In this way we may easily, and in a manner without labour or any considerable charges, procure a running *Mercury* from all Minerals and Metals; which *Mercury* of Metals suffers it self afterwards to be fixed into a true Tincture for Men and Metals, by means of its proper Agent and Secret ever-burning Fire, and this easily without any loss of weight, which cannot be expected from a common *Mercury*, and therefore we must be provided of a Metallick *Mercury* if we would do this feat. *Mars*, *Venus*, and *Mercury* are the best amongst the meaner Metals for this purpose, as yielding the best *Mercury*, but the *Mercuries* of *Sol* and *Luna* are the best of all. And it is a thing that deserves our wonder, that from such Compact Bodies, as those Homogeneal Metals are, which are accounted indivisible, a Volatile *Mercury* should be separated. Indeed had I not done it my self, I should hardly have been perswaded of its possibility. Resuscitative *Salts* are the only means to effect this Wonder, and whosoever knows in due manner to apply them to Metals, to him it is an easie thing, yea, Childrens play, in one days time, without toil or labour, to separate a running *Mercury* from all Metals and Minerals. There is one only *Salt* in the World, which has a power above others to revivifie Metals, costs nothing, and is every where to be had in abundance: This contemptible *Salt* the Philosophers have always concealed, saying, that *it is cast out upon Dunghils, and as much beloved of the Wise, as it is hated and despised by Fools.*

In this *Salt* greater secrets lie hid, than in the *Salt* of Art before mentioned, which cannot be had without toil and labour; but this our more secret Resuscitative *Salt* of Art doth far excell that, for it not only exalts and multiplies the colours of *Sol* and *Luna* as well as that, but also radically opens all Metalline Subjects whatsoever, separating their purest *Mercury* from the gross *faeces*, and brings it over with it self, which no other *Salt* in the World can do. There are indeed some other *Salts* to be found, which in some degree do resuscitate Metals, and separate a running *Mercury*, as *Salt* of *Tartar*, *Urine*, and the like, but are not comparable with our resuscitative *Salt* of Art, which, for all them, continues the undoubted Monarch over all *Salts*. There are very few to be found, who are able with so much ease and little charge to separate a running *Mercury* in quantity from Metals, and fix the same into a true Tincture. Wherefore we should make it our business to enquire into the nature of *Salts*, and learn to know their several uses; because in *Salts* great good lies hid, which few believe or apprehend. *Plato* indeed was of opinion, that something Divine was contain'd in our common *Salt*; and other Philosophers have not stuck to say, that *in the Sun and Salt is All.* He that doth not know what Fire and *Salt* are, knows nothing, and deserves not the name of a Philosopher.

And thus much shall suffice concerning Fire and *Salt*, and the great things that may be performed by them. He therefore who desires to approve himself a good Physician or Chymist, let him study the nature of Fire and *Salt*, and learn to distinguish them, for without this he'l never do any thing to purpose in either faculty.

To return now to our Spagirical Purgatory, and shew that the Philosophers by means thereof performed their greatest Arcana. *Paracelsus* alone, the Monarch of Physicians, gives us a sufficient Testimony hereof, when, treating of the Element of Fire, in his Book of *Sulphur*, he saith, That if a Physician have not amongst his Secrets the Element of Fire from *Sul-*

phur, he is not a Physician, but a——— O my dear *Paracelsus*, thou art not to be blamed for thy zealous inveighing against those Lazy Lubbards, and if thy words be Authentick, 'tis to be feared that scarce one good Physician will be found in all *Germany*, forasmuch as the Element of Fire of *Sulphur* is utterly unknown. But this cannot be said, for that besides this Element of Fire, there be several other good Medicaments a Physician may prepare. Yet forasmuch as I have writ somewhat of it here, I hope it may stir up some to search after it, and so learn to prepare their Medicines by Fire; because whatsoever can without hurt or loss abide the Fire, the same must needs be very pure and good.

David to this purpose gives us a similitude of *Luna*, which must sometimes pass the Fire, before it attain its utmost purity. This art of cleansing things with Fire, was by the Philosophers of old termed *Ysopaica*, of which see *Paracelsus*.

It is to admired, that how black or smutty soever any thing be, after it is wash'd by Fire, it becomes snow white; which the *Mercury* driven by Fire from black *Sulphur* and *Mars*, is alone a sufficient proof of, in which whiteness the fairest Red lies hid. That *Ysopaica*, or the Art of Washing with Fire, and thereby changing Black to White, was in use amongst the Ancients, seems probable from *David*'s words, when he cries to God; *Purge me with Hyssop, and I shall be clean, wash me, and I shall be whiter then snow: David* here desires nothing else, than to have his Soul, which was cole black by Sin, washed and purged by the Fire of the Holy Ghost, and therefore by way of Comparison he mentions *Ysopaica*, or the Art of Washing black things white by Fire. In a word, this Art of Washing things snow-white by a Philosophical Purgatory Flame, appears to be the head skill of Philosophy, Physick and Alchimy.

And forasmuch as I have here made mention of *Ysopaica*, I hope I shall not be thought tedious, if I set down some more instances of cleansing black and impure things by Fire. For seeing this excellent and incomparable Art has for some hundred years been in a manner wholly lost, *Paracelsus* being the first that hath renewed the knowledge of it, I have thought good at present to restore this Royal Art to its former lustre and glory, wherewith it shone forth in the Schools of the Kings of *Egypt*, where those of the Blood Royal were taught and instructed in the same. In which Schools *Moses* also (as being the Adopted Son of *Pharaoh*'s Daughter) had his Education, being there instructed in all the Wisdom and Skill of the *Egyptians*.

In those times this *Ysopaica*, or Art of Washing with Fire was in great esteem and flourished, which was the cause of the great Riches and Puissance of the *Egyptians*, which continued till the Monarchy was made subject to the *Romans*; and yet even then, being Possessors of *Ysopaica* and *Chrysopeia*, they soon put themselves into a condition again of disputing their Liberty with the *Romans*, and rebelled against them; and though by the prevailing Power of the *Romans* they were still overcome, yet did they often reiterate their Revolt; until at last the Emperor *Diocletian* being informed that their Art of Chymistry was their inexhaustible Treasure, which still encouraged them to rebell, sent a great Army amongst them, with Orders to Ransack all Places for Books treating of that Art, and commit them to the Flames; which done, they quietly afterwards endured the *Roman* Yoak, which before, on every occasion, they were ready to shake off. By the same means also the said Art has been as it were totally lost, which I am not without hopes to restore again, and if Death should chance to prevent me, yet will it assuredly be done after my Death by *Elias* the *Artist*. I have indeed already in some of my last Treatises so plainly writ of this Art, that any one, who is any thing skilful in the Fire, may become Master of the Art.

To return then to *Ysopaica*, I say, I have already communicated the use of a Burning Spirit, by means whereof all stinking, impure, Vegetable, Animal, and easily inflamable Mineral Subjects, may be washed to the highest degree of Purity, with which great things may be performed, especially in Physick, and such as are impossible to be done by any known way. Indeed by this alone most profitable discovery, I have discovered a new World of Art, which for so many hundred years has been unknown; and I doubt not, but this way of washing with Fire will serve for a shining Light to lead Physicians to the true Spagyrical Physick.

Thus much shall suffice to have spoken concerning the moist fiery washing by means of a Burning Spirit; it remains now to declare in what manner the Compactest Metals, and Precious as well as Common Stones, may by a dry cleansing Fire be meliorated. For a Spirit of Wine is much too weak to pierce the Bodies of Compact Metals, and to wash them to a perfect cleanness; wherefore we are to look out for a stronger Wash-Fire, which may be able to Master the fixt as well as unfixt Metals. Now Art hands to us a certain dry Wash-Fire, wherewith the Ancients meliorated all Metals and Stones; but this dry Fire has never been published, neither know I any Author that hath writ plainly of it, save only *Paracelsus* in his *Cœlum Philosophorum*, where speaking of *Mercury*, he describes this flaming Wash-Fire, *viz.* ℞. Of *Tartar* part j. *Sulphur* p. ij. *Nitre* p. iij. being well mixed together, use them. *Paracelsus* calls this Composition a good fluxing Powder; but hints at other things, as appears by those words he places before the Description of the said Fulminating Powder, *viz. Pulvis adole Verbenas*, which words conceal a great Mystery, as will presently appear.

The Composition of *Paracelsus* may be meliorated by taking only one part of *Sulphur*, *Tartar* ij. and *Nitre* iij. and is a very good Wash-Fire. There be also many more and better Wash-Fires for to Purifie and exalt Metals, of which we shall hear anon. Follows now the use of the foresaid Wash-Fire.

And first it is to be observed, that to the end this Fire may have the better effect, the Ingredients must be pure, dry, and very well poudred, for by how much purer the Ingredients be, the stronger is the Fire. When therefore we have a mind to wash any Metal therewith, suppose impure *Sol* or *Luna*, we must file the same very small, and then mixing three or four parts of the said Powder with it in a Crucible, kindle the mixture with a red-hot Coal, and the Flame thence arising, will consume all the impurities of the Metal, or separate them as dross, the pure Metals sinking as a *Regulus* to the bottom. And if the Operation be duly performed, the *Regulus* will be as fine as if it had pass'd the *Cupel*.

If we desire yet further to increase the strength of this Fulmen or Wash-Fire, we may take instead of *Tartar* half the quantity of the Saw-dust of dry Lime-tree, which affords a much stronger Flame than *Tartar*, and consequently better purges impure Metals. With this strong Fire we may in a moment purifie a small

quantity

quantity of *Sol* or *Luna* if we please, in a Nutshel; which I do'nt mention here as a thing of Profit, but only of Curiosity, and to shew the force of this Fire.

N. B. If we desire to make use of this Wash-Fire to Profit, we must not take a Common *Nitre* or *Sulphur*, but such a *Sulphur* as burns faster than the Common, and the *Nitre* must be purified, whereof more hereafter.

A Good Fulmen or powerful cleansing Fire for to purifie the Common Mercury, *so as afterwards it may be easily fixed.*

We are to know, that the Common *Mercury* contains in it self an extraordinary fiery Spirit, which hinders it from being a Compact Metal, and keeps it in continual Flux like a Molten Metal, and makes it so difficult a work to fix it: Now if we can but extinguish this Fire in him, he'l be easily reducible to a Compact Metallick Body.

It is notorious, that always a greater Flame overcomes and swallows up the lesser; to extinguish therefore this Fire in *Mercury*, we cannot do better, than make use of a strong Fulmen, which *Paracelsus* hints with those words, *Pulvis Adole Verbenas*, as if he had said, Go Fulmen and burn the Wings of that Volatil Bird, that he may flie no more. But the Fulmen he there describes will not do it, a stronger must be made use of in that case. To this purpose I have made many trials in my Youth, but have found none better than the Fulmen of *Jupiter*, which takes as follows.

℞. Of Crude *Mercury* and fine *Jupiter* each j l. melt the *Jupiter* in a Crucible, and when it begins to cool, pour the *Mercury* upon it, and the heated *Jupiter* will take to it self the *Mercury*, and become an Amalgama, which Amalgama must with dry and purified *Nitre* be ground upon a Stone. This done ℞. of the strong Fluxing Powder abovesaid, the same quantity as the *Amalgama* and *Nitre*, and grind them well together, and then the Mixture is ready for kindling. But the Operation must be performed in the open Air, where the Wind may carry away the poisonous Fumes. The Mixture may be put into a strong Earthen Pot, and after Detonation, there will remain a Mass difficult to Flux, which being Cupell'd, and separated by *Aq. Fort.* affords a considerable quantity of *Sol* and *Luna*, abundantly recompensing the cost and labour of the Operation. After that the Mixture is kindled, the Matter must be often stirred with a red-hot Iron, to the end that no part may remain unkindled, but that the whole Mass may be red-hot throughout.

Another Fulmen to graduate Venus *into* Luna.

℞. Of the foresaid Fluxing Powder of *Sulphur*, *Tartar* and *Nitre*, and grind with it iv Ounces of *Mercury* of *Luna*, and lay the same weight of thin Plates of *Venus* SSS. with your foresaid Composition, kindle the Mass, and the proceeding Flames will graduate some part of the *Venus* into good and fix *Luna* with considerable profit, the Operation being rightly performed. With the same Fulmen, ♂ may be graduated into ☉. and forasmuch as it doth not melt, it's better than *Venus* for this way of working; Needles are best for this purpose.

Another Rapid Fulmen changing Iron and Steel into Good Gold.

℞. Of the abovesaid Fluxing Powder, iv or v ℥. mix with it j ℥ or half an Ounce of *Aurum Fulminans* precipitated from the *Aqua Regia*, not with *Salt* of *Tartar*, but with *Salt* of *Urine*; with this Fulmen and Steel Needles make SSS. in a Crucible. Let not the Needles be above j ℥ weight, else the Fulmen will not be able to graduate them wholly into *Sol*. This Process well managed affords a good increase of *Sol*. It is also no contemptible Curiosity to see Needles chang'd to *Sol*, their pristine form remaining. I took once 20 or 30 Needles, which I put with their points up to the midst in the said Fulmen, their upper halves remaining untouch'd by it, and after Fulmination took out the Needles, the lower part of which was pure *Sol*, the upper continuing Iron, which I distributed amongst my Friends and Lovers of Art for a remembrance. The same may be performed with Nails.

Now though in this Gradation of ♂ there be no very great Profit, yet neither is there any loss; and besides the Curiosity of it, is a convincing demonstration that ♂ without deposing any Terrestreity, may have it's whole Body changed into *Sol*.

N. B. The remaining Fulmen may with a little *Nitre* be melted down to a *Regulus*, by which means the *Sol* is recover'd, and so we have our graduated Needles for nothing.

N. B. When we have a mind to make use of the *Fulmen* of ☉, we had best place the Crucible, in which the *Fulmen* and *Mars* is, in a large glased Earthen Vessel, and as soon as it is kindled cover the Crucible, that the *Fulmen* may not fly abroad, or if any does, it may stick to the sides of the Pot, which being wiped off with a Feather, may be reduced with the remaining *Fulmen* in the Crucible, that there may be no loss.

N. B. It happens sometimes, when too great a quantity of ♂ is taken to be graduated to ☉, and the Flame too strong, that the Needles melt into one, especially if they be laid too close together.

N. B. In Case, the Needles should not in the first Fulmination be wholly changed to ☉, the Work may be repeated with fresh fluxing Powder. And if any one desires more Profit from this Operation, let him mix some of the *Amalgama* of ♃ and ☿ with the Golden *Fulmen*, and Fulminate with the same Needles, or thin Iron Wier, by which means the ☿ will better diffuse the graduating ☉, or Spirit throughout the ♂, and so more of it becomes changed into ☉.

N. B. He that would draw considerable Profit from this Operation, had best perform it in a close earthen Vessel, with a large Recipient fitted to it, for to catch the ☿, which may be used again, by which means that gain will be more.

N. B. For to make this Work yet more gainful, we may instead of the ☉ mix with the *Fulmen* of ♃ and ☿, some fine powdred Red, Brown, or black Pebbles, which are found in running Water, and break as smooth as Glass, and contain much Volatile ☉, grinding them well together. This *Fulmen* when kindled, drives the Volatile ☉ out of the Pebbles, and being received by ♃ and ☿ is fixed by them, by which means much ☉ and ☽ may be had out of ♃ ♀ and ♂. Out of these Pebbles with *Aqua Regis* much ☉ may be extracted, and tho' the ☉ in them be Volatile, yet partly by means of the *Aqua Regis*, and partly by being precipitated with the *Mercurial* ▽ out of ♃, and by Reduction it is fixed: Concerning which I have

have largely treated in the Seventh Part of the Prosperity of *Germany*.

N. B. To work on these Pebbles with more Profit, we may when reduced to fine Powder, extract them with ▽ in which common *Salt* has been dissolved, to which Extraction (which will be of a very high Colour) we must add some of the Resuscitative *Salt* of the World, every where to be found, and then abstract the Solvent from the Extract, by which means the Resuscitative *Salt* will make ☉ more Volatile, and separating it from the fixer Part, bring it over the Helm, in form of a yellow Liquor, which when mortified by a *Lixivium*, and reduced to a dry ☉, if then it be driven through a Retort, you will find a running ☿ *Sol* in the Recipient, in small quantity indeed, but of great Virtue; which by the Fire of *Artephius* may easily be fixed into an Universal Tincture for Men and Metals. A *Lixivium* may afterwards be poured on the remaining Extract, for to mortifie the Corrosive Spirits, and then distilled by Retort, it will yield some more *Mercurial* ☉. As for the fixt ☉ which was in the Pebbles, the same may be easily reduced, and will be good ☉, tho' somewhat pale Coloured, the *Salt* of the World having carried some part of the Colour over with the ☿.

N. B. Our Resuscitative *Salt* of the World is a very wonderful *Salt*, for when joyned with the dissolved ☉, it not only brings over a running ☿, but part of the Colour of ☉ with it, wherefore also the said *Mercurial* ☉ affords a most glorious Medicine, when duely fixed. In the same manner you may get a tinging ☿ from ☽, but much better, and easier from a ☽, which lies Volatile in its own Matrix, and has never touched the Fire.

N. B. But this *Mercurial* ☽ doth not tinge into ☉, but only into ☽. In the same way a ☿ may be driven from all Metals, and in considerable quantity. The ☿ of ♂ and ♃ are the best; those of ♀, ♄ and ♄ are good also, but not so high colour'd, as that of ♂ which is the best. Now to make ☿ of ♂, we need not dissolve common ♂, and thence with *Salt* of the World drive a ☿; but it is better to take Iron-stones, which have never touch'd the Fire, and having extracted them, add to them some of the Resuscitative *Salt* of the World, which then distill'd will yield more ☿ than common ♂. In like manner much more ☿ may be had from ♄, ♄ and ♀ Oar then from the Metals themselves.

I remember, that, in my youthful years, I laboured two years continually with a Person of high quality, to obtain a ☿ of ♄, we tryed all manner of ways but got nothing. Whether it was for want of Experience, or that the Process given us was not true, or because God did not see it fit for us, I know not: But this I know, that we had no knowledge of the universal Resuscitative *Salt* of the World, making use only of common *S. Armon.* and its Volatile Spirit.

I have, in the Seventh Part of my *Pharmacopœia Spagyrica*, taught a way to draw a running ☿ from Metals, but in small quantity, whereas by means of this *Salt* of the World, much more is obtained. I say therefore, that if from my last published Writings, Men cannot discover the way of making the *Mercuries* of Metals in good quantity, it will be a sign to me, that God will not permit it, having plainly set down every thing, except the Resuscitative *Salt* of the World.

And I now say again that the said *Salt* is no where to be sold, since enough may be had for nothing. God must reveal it, for Men will hardly do it. It is a mere Gift of God to know this *Salt* and its use. *Turba* saith concerning it: *If God had not created this* Salt, *it were impossible to perfect our Elixir.* From whence we may see, it is no *Salt* prepared by Art, nor made with hands, but created of God of nothing. Consider well what is here said, and you'l find Wonders. *Cosmopolita* speaks after this manner of this *Salt*, *viz. Nature affords us a* Chalybs, *which can from the Rays of the Sun extract that, which many have sought and not found.*

Other Philosophers speak of this *Salt* in these Words: *The Spirit and* Salt *of the World, bring the Souls of the dead out of Hell.* What is this Hell, but a *Stygian* Water, wherein we dissolve Metals, and after draw forth their Souls with the *Salt* of the World. Of which Spirit and *Salt* of the World, *Nuisement* hath writ a curious Treatise. I say therefore, that he who understands the due way of applying this *Salt*, for drawing the ☿ of Metals, has obtained the greatest Secret in the World, the said ☿ being easily fixable into a true Tincture.

I have known several, who could fix the ☿ of ♄ and ♂ prepared by others into Tinctures, but could not prepare the *Mercuries* themselves: And to this day, I do not know one Man that can bring a running ☿ from Metals, tho' I have communicated the way of making the said ☿ to many, as it is set down in the Seventh Part of my *Pharmacopœia Spagirica*: But seeing so small a quantity prepared that way, they let it drop. It had been well, they could have been satisfied with that: But Men generally are of such a Humour; that if they cannot have all without Toyl or Labour, they presently despond and give over; but they that persevere to the end shall obtain the Crown of Honour.

Thus much shall suffice, by way of Parenthesis, concerning preparing the *Mercuries* of Metals in great quantity, by means of our Resuscitative *Salt* of the World.

Let us now return to our dry wash-Fire, and see, what further may be done with it. We know, that with a Rapid and violent Flame, the Volatile part of Metals is driven away, the fixt and grosser staying behind: As for Example. If I dissolve a Metal, or Mineral in *Aqua Fortis*, and afterwards add to the Solution some good *Niter*, by this means the Metal abides with the *Nitre* and shoots with it into Crystals, which from ♂ are Red, from ♀ Green, from ☿ and ♃ White, from ☉ Yellow. When now this *Nitre* is kindled, the Volatile part of the Metal sublimes from the grosser, and is better for Medicinal use, than the gross Body of the Metal.

N. B. But if to this *Niter* impregnated with a Metal, we joyn some *Salt* of the World; and then detonate it, the said *Salt* through the Flames carries the immortal Soul of Metals out from Hell, that is the ☿ of them, which afterwards may be fixed into Tincture. The said *Nitre* impregnate with Metal, and the *Salt* of the World, doth also, by means of a swift Flame draw the Colours from precious and common Stones, and introduceth others, and better into them again; which is a thing of great Profit to him that hath Skill of it. This is the speediest way of meliorating Metals, when by means of a Rapid *Fulmen*, as it were in a moment, we separate the pure Soul, or incombustible ♎ from the gross Metal: For in this quick Flame the superfluous ♎ of the Metals is consumed, which ties the pure ☿ to the Metal, and makes the same difficultly separable from its gross Body.

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In this manner a pure ☿ may in quantity be drawn from all Metals, and as much ☿ as is got this way, so much Tincture, for every ☿ of Metals is fixable into Tincture, which cannot be said of the common. And yet amongst these *Metallick Mercuries*, one yields a better Tincture than another, the ☿ of ♂ as hath been said being the best, tho' that of ♄ be good also. He who is come so far as to be able to make the ☿ of any one Metal, with the help of the *Salt* of the World, may easily do the same with all the rest, and then try which ☿ is the best. I have tryed several, but found none better then that of ♂. For which Reason also sometime before my falling Sick, I bought up a great quantity of Steel Needles unfit for common use, with intention to make a great quantity of ☿ of ♂, but being seized with Sickness not long after, and continuing Bed-rid till now; my design was hindred. Now whether God will be pleased to raise me, that I may prepare a good quantity of the said ☿, for those that come after, I know not; for at present by reason of my Weakness, I have no hope to do any thing. And therefore have determined with my self, to manifest these and the like great Secrets to the World, as far as my Weakness will permit; that they who are Lovers of Art may know, and work them, or let them alone as they please: For it shall suffice me, to have discovered the wonderful Works of God to mankind, not at all concerning my self with the rest.

'Tis here to be noted, that the ☿ which by means of the *Salt* of the World, in the moist way is drawn forth from *Aqua Fortis*, or other like corrosive Liquors, is purer than that which, in the dry way is forced over with a strong Fire, yet both are good, and fixable into Tincture. It is also less trouble to bring over the ☿ of Metals in the moist way, than by a strong Flame. For when a Metal is dissolved in *Aqua Fortis*, and *Salt* of the World added to the Solution, then if by *Alembick* you separate the *Menstruum*, part of the ☿ will come over with it, which, as before-mentioned, is to be separated from it: Afterwards drive what remains in the *Alembick* through a Retort, and the *Salt* of the World will carry more of the ☿ over, by which means a good quantity of ☿ will be obtained. For which God be praised, who hath shewed us his poor necessitous Children so near and strait a way to the Land of *Promise*. For I still say (as I always did) that nothing more excellent can be found, either in Physick or Alchimy, than the ☿ of Metals, all other Works being mere trifles in Comparison of it: Because such a ☿ well fixed, is not only the highest Medicine, but besides Tinges ☽ and ☿ inte ☉. I have clearly and fully described the manner of it, Preparation, save only, that I have not named the *Salt* of the World, because it is such a vile and contemptible thing, and cast out upon Dunghils: And yet nothing in the World lives without it. No living Creature in or upon the Earth, Bird in the Air, nor Fish in the Water is sustained without this Universal *Salt* of the World. Concerning this *Salt* of the World, or true matter of the Universal great Stone of the Philosophers, an unknown Author in the Thirty fifth Chapter of his Book writes thus,

That the first Work of the Elixir, is every where to be found.

Concerning the true making of the Elixir, as to its first Work, the Philosophers say, that the true Matter is every where to be found; because it is in every Man, and found with every Man. *Adam* brought it with him out of Paradise, and when he died took it along with him to his Grave. And therefore an Allegory of the Wise men saith, that the said *Matter is subtilized* ☉, that is ☉ advanced to the highest pitch of mineral Virtue. Concerning this ☉ it is said: *With our Gum and little* ☉, *we can buy much.* And *Albertus* in his Book of Minerals saith, and proves it, that ☉ *is every where to be found*: Because there is nothing made of the four Elements, in which, after its highest refining, ☉ is not to be found, and therefore they say it is every where to be found. The same *Albertus* also asserts, that *a great Mineral Virtue is in every Man*, especially in his Head between his Teeth: For that in his time, in old Graves ☉ was found in little longish Grains, between the Teeth of dead Men Skuls, which could not be, except the said mineral Virtue were in Man, which mineral Virtue is in the Matter of our Elixir. And therefore it is said, that the Stone is in every Man, and that *Adam* brought it with him out of Paradise, *&c.*

The Philosopher tells us here, proving it by several Authors, that the true Matter of the Elixir, as to the first Work, is to be found with every one: Concerning which Matter, much might be said, but it is better be silent for fear of the abuse of wicked Men. Yet I cannot but hint here, how it may be made out, that ☉ can grow in the Skuls of dead Men, as before-mentioned. It seems probable then, that these were the Skuls of such Men, who in their Life-time much used ☿, either taking it inwardly, or much handling it in their Trades. Now it being the Property of ☿, to mount upwards to the Head, and settle between the Teeth, we may suppose, that by length of time the *Microcosmical* ♀ did Coagulate it into ☉. Let no Man think this impossible, for the ♀ of Mans Dung hath a very great affinity with the Mineral ♀, which no Body can better witness, than he to whom God hath revealed it, and who hath found it true by Experience.

The Reader by this time hath sufficiently perceived, how the *Mercuries* of all Metals may with ease be brought over, by means of the *Salt* of the World; as also, how the same may be had with the help of a *Fulmen*, or strong Flame of Fire.

Now he that is Master of these *Mercuries*, will not be far to seek, for the way of fixing them; for which there is no nearer way, than to maturate them to a Tincture, by means of *Artephius* his Fire, for all other ways are very tedious, concerning which Fixation by the said secret Fire, the Reader will find more in other Parts of my Writings.

Herewith, then I conclude this First Part of my Purgatory, or cleansing Fire, with which all unclean black Subjects may be washed to the highest degree of Purity and Whiteness. If by chance, I should here have omitted one or other Circumstantial of the Work, (as I hope not) I shall, as it comes to mind, set it down in my following Writings. In the mean time Farewel, and remember the *Salt* of the World, learn to know it, and its Use, for so thou wilt be able to make the *Mercuries* of all Metals, which in value exceed all ☉ and precious Stones.

An Advertisement to the Courteous READER.

FOrasmuch as in this little Treatise, I have revealed many Secrets, and particularly, the easie Preparation of a running ☿ from all Metals, and that a true Tincture cannot more readily be obtained, than from such a ☿, which with ☉ becomes fixed to a Red, and and with ☽ to a white Tincture, and that this Fixation is most easily performed by the secret Fire of *Artephius*. And have also taught, how from all Vegetables and Animals, a most excellent ☿ of great Virtue may be prepared, by means of a burning Spirit; in all which I have writ nothing, but what I have wrought with my own hands. I know there will not be wanting some envious and ignorant Men, who will pretend it impossible to get a running ☿ from Metals: But it is no wonder, that this is counted impossible by those, that have not attained to great Skill and Experience in the Fire, who may well be compared to little Children, who when they hear any Body talk of the Great World, can form no other Notion of it, than of the place, or House where they have been educated; neither can such ignorant conceited Persons believe any thing, but what they have seen themselves. It is enough for me, that I know it to be true.

Now forasmuch as I have before declared, that this ☿ of Metals is the neareſt way to attain an universal Tincture, for Men and Metals, and that out of Vegetables, Animals, and all other things, that admit a Separation of Elements, a ☿ may be had, as well as from Minerals and Metals, and from that ☿ a Tincture: I intend here for further Confirmation, to add the Testimony of an old Book, which with many words confirms what I have writ, concerning the ☿ of Minerals, Animals and Vegetables, and therefore have thought fit, to subjoyn the Conclusion of the said Book, as an Appendix to this Treatise, by which, those, who understand, will perceive that I have writ the Truth, concerning the ☿ of Vegetables and Animals. The Author is unknown to me, but that he was an experienced Philosopher appears from his Writings, which contain great Truths: These as they were gladly received by us, so we highly recommend them to all Learners, and Lovers of Art: Here follow the two last Chapters of the said Philosopher.

A Recapitulation: Or, Summary Repetition.

WE have sufficiently explained to thee the thing, if thou hast rightly understood our words. And observe, Son, that the Operations we deliver in this Book, concerning the Composition of the Great stone, are more subtil than those, that *Geber* has delivered in his Summ: For he saith, that in different intervals of time, it is first sublimed, next fixed, afterwards calcined and then dissolved, and so of the rest. Bu as to this our Book, know, that the Distillation by *Alembick* we call Sublimation, and the Solution of Bodies, we likewise call Sublimation, because by this means the Earthly Body is lifted up into the Air, which is Heaven. Wherefore know, that when we dissolve, we at the same time do Sublime, Calcine, Purifie, Wash, conjoyn and separate. To this purpose, *Haly* in his *Secret* of *Secrets* tells us, that between the Solution and Conjunction, or the Matrimony and Union of Body and Spirit; there is no distance of time; because when the Body is dissolved, it is by that Solution joyn'd with the Spirit, and therefore he saith, that Solution and Conjunction are at the same time. This therefore is the Order of our Operation, which is done at once in one hour: When our Body is put to dissolve in Water, then presently it is solved and sublimed, and by being dissolv'd and sublim'd, the Body becomes united to the Spirit; and if any thing of an extraneous Nature be mix'd with the Body, the same will not be dissolved, but will remain in the bottom of the Vessel for to dissolve, and thus the Body becomes cleansed of the extraneous Matter, if any be in it; yet is it in some sort sullied, nor is it so clean and clear as it ought. Wherefore our Operations in making the Great stone, are more subtil than those contained in *Geber*'s Summ, because what he says is done at several times, is here done at once, and of a subtiler Matter; and after a subtiler manner. And when thou shalt see our work, deareſt Son, then wilt thou know, that we have spoken the Truth, tho' not before: And indeed, except thou shalt give good heed to it, and sharply consider of it, thou wilt scarcely perceive it to be so, because of the quick, subtil and short Operation. But be sure to avoid the fumes in this, as well as other ways of making the Stone, as far as is possible, which if thou shouldst take in, would greatly hurt thee, either at the very instant, or not long after, except thou hast Remedies at hand to oppose their Malignity, which thou oughteſt always to be provided with, that as soon as any such thing is perceived, a proper Antidote may be taken.

CHAP. LVI.

FRom all that hath been said from the beginning hitherto, may be gathered by a piercing eye, that in our Operation our Bodies do not abide in the top of the *Alembick*, as the Bodies of Fools do: Of which *Aros* saith: *The Bodies of the unwise, do only stick to the Cover or Head of the Vessel, and therefore they cannot effect any thing that is true.* Hence also may be gathered, that *Sulphurs* are retain'd by ♄, Bodies by Bodies, and Spirits by Spirits; and every imperfect thing is perfected by one thing, that is by ☿ alone, that is, by a substance, which is produced by our foresaid famous, excellent and glorious Magistery. Wherefore for a final Conclusion we say, that the Blessed stone is one, the Medicine one, to which nothing extraneous is added, nor taken from it, only its superfluities removed. Understand this, as *Hortulanus* saith: That, *That is not extraneous, into which it must be changed*, that is fixed, *viz.* ☉ and ☽. Therefore this stone is Mineral, because it is produced from all Mineral things. But because *Hortulanus* saith, that *Hermes* the Father of all *Alchimists*, was Possessor of the three parts of Philosophy, of the whole World, *viz.* Mineral, Vegetable and Animal: The true knowledge of which three Kingdoms, the said *Hermes* had joyntly, or severally in the work of the Sun; which parts are contained in one only Stone, *viz.* in ☿, that is under the name of ☿, because every thing of which the Stone is made, whether it be Animal, Vegetable or Mineral, is called by the name of ☿. We have also before shewed, how this Philosophy, or Science is compleated in the work

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of the Sun, by means of a Mineral ☿. Now to the end that this Science, or most excellent Point of Philosophy, may be perfect in every Point, we must see how this Stone may be had, by means of a Vegetable ☿, from Vegetables, and by an Animal ☿, prepared from Animals. And first, we will shew how the Stone may be made, with a Vegetable ☿: For except the Great Stone might be made from many other things, besides those mentioned in the former part of my Discourse, that saying of *Alphidius* would not be true: That *there be many other Subjects, which solve and congeal.* And *Hortulanus* saith, *the Philosophers have called every thing, the Stone, from whence the four Elements may be separated, by our Chymical Artifice:* Now this may be done, from every Vegetable and Animal; wherefore from every Vegetable or Animal, may the Great Stone of the Philosophers be prepared.

The two last Chapters of this Anonymous Philosopher, contain a short Repetition of the Matters handled in his whole Book, wherein he asserts, that the Preparation of the great Elixir, he sets down, is far more subtil, excellent and Skilful, than that of *Geber*: Because the Operations which *Geber* doth successively, one after another, he shews, how they may be done all at once; for that when he dissolves, he at the same time, in the same Vessel, with the same degree of Fire, and in the same Furnace, doth also Sublime, Calcine, Cleanse, Wash, separate and conjoyn: Because, when the hard Body is put into the dissolvent, to be dissolved, it presently turns Black, and is throughly dissolved, calcined, sublimed and joyned with the Spirit. And I leave it to every judicious Person to judge, whether this way must not be very ingenious and Artificial, which at once, so easily and suddenly finisheth all these Operations, belonging to the work of the Stone. Neither was it without Reason, that the Author affirms, that the possibility of this Accurtation cannot well be believed, or apprehended by any, but those who have seen it.

N. B. Now that all these Operations may be done at once, my self can witness, as having before my Sickness performed the same with mine own hands. And however this may sound very strange to those, whose Experience never reached so far, yet is it an undoubted Truth with all those, whom God hath been pleased to illuminate, giving them the understanding and performance of this great (I had almost said, Holy) work.

Our Author in his last Chapter concludes, that of all things from whence the Elements can be separated, the Stone of the Philosophers may be made; to the Truth of which, also I can set my Seal. For when about half a year since, I had recommended to an old Friend of mine, the manner of preparing the ☿ of Wine, and that the said Friend by reason of his business could not come to me, to overlook the Work himself, because he lived in another City, and I by reason of my Sickness kept my Bed: It was concluded by us, that a third Friend should come to my House, and carry on the Work, from the beginning to the end, which accordingly was done in three or four Days. But forasmuch, as in so short a time, we could not prepare any great quantity of the Spirit of Wine, we had but little to burn away, and consequently could not get much ☿, or Cælestial ☉. Now it happened, when we were separating the ☿, we had caught, from the Phlegme, that the Fire, by mistake was too strong, so that after the Phlegme was come over, we found the remaining Heavenly *Salt*, or ☿ of Wine in the bottom of the Glass molten to a Red stone, which could not be dissolved with common Water. Whereupon I ordered some *Aqua Regis* to be poured into the Glass, to dissolve the ☿, which presently succeeded, the Solution being Blood-red. But the ☿ being by this means spoyled, as to any Medicinal use, I resolved to try what it would do on Metals, and accordingly put a little piece of fine ☽ into the Red Solution, left it there two days, and then taking it out, found it changed into ☉ as far as could be judged by the Eye, or Touch-stone. But because I could hardly believe, that ☽ could be so easily turned to ☉, I put it into a strong *Aqua Regis*, to see whether it would be dissolved in the same, as other common ☉, and put a piece of common ☉ with it, to try which of both would be first dissolved: Whereupon I found, that the *Aqua Regis* rather laid hold on the common ☉, than my transmuted ☽, the half of which was only dissolved, and I have the other Part still to shew. Which tryal made me so desirous of proceeding to another, that I got a new instrument prepared, for to make the ☿ of Vegetables and Animals, but have as yet been unable to undertake the Work, by reason of Bodily weakness, and for want of some faithful assistant. Yet am not without hopes, but that with the first I may make some further Tryals, all things being in a readiness for the Work, to which God be pleased to afford his Blessing, *Amen.*

From this Relation it is evident, that a Vegetable ☿ is able to meliorate Metals: That it excels for Physick cannot be doubted, and therefore the said ☿ may be called a Master in both Faculties. Now if a Vegetable ☿ will do this, what may be expected from a *Metallick* drawn from pure Metals, and brought over by the Spirit of Wine? Without doubt, much more than the ☿ of Wine alone, without any Metalline addition. If it please God, I intend to second this Treatise with another larger, concerning the ☿ of Metals. In the mean time, I here make an End.

OF THE

Secret Fire of Philosophers.

By which, They not only brought to Maturity their Universal Medicine, but also fixed particularly all the inferior Metals, into good Gold and Silver, with great Profit.

Written for the Sakes of all the Lovers of Divine and Natural Wisdom.

Faithfully Translated out of the High-Dutch.

Reader,

SEEING that in several of my Writings, I have made mention of the secret Fire of *Artephius*, which *Pontanus* very well called *Proprium Agens*, for no better name can be given it. I thought it convenient to publish this small Explication of it, that it may be known to those, who have not yet heard of it, not doubting, but by this discovery a great Light will be opened to all the Lovers of *Metallick* improvements: For almost all Philosophers, in their Writings, are dark concerning this; and yet without this, no great Matter is to be effected in *Chymistry*: Which daily Experience sufficiently testifies. Therefore I am resolved briefly to explain, yet fundamentally and plainly, by Gods help, this thing which hath been so long hid from the World.

Of the Secret Fire of Philosophers, by which they have maturated their Tinctures.

First you must know, that no Philosopher hath made any mention of it, but hath passed it over in silence, only that ancient Philosopher *Artephius* hath taken some notice of it, but so obscurely, that very few of his Readers, have been able to learn any thing from him. He saith, that himself, like others, had been covetous and envious, so as to write nothing of it; but after he was nine hundred years old, he first began to write of it. *N. B.* It is not credible, that he should have lived to that Age, but perhaps some Body hath added a Cipher to it. 'Tis like he was ninety years of Age, for the Ancients have often mistaken an hundred for ten. But be it as it will, he was the first, that said any thing of this Fire. *Pontanus* writes in his Epistle, that although he knew the true Matter, yet he erred two hundred times, and should never have obtained it, if he had not learned the secret from his Writings. The reason of hiding this Secret so long, hath been only the wickedness of Men, who seek not after these great things, that they might honour God, and succour the Poor, but rather, that by great Riches they might be able to enslave their Neighbours. But when such Men, who have forsaken the Vanities of the World, seek after them, God puts it into their hands, so that striving nor running in this helps nothing, but only Gods blessing. Observe this well, and thou wilt not err. If our eyes and hearts were not blinded by the Pride of the Devil, we should easily see and know, what Fire nature useth in the Earth, to bring Metals to Maturity: By which we might easily learn, what Agent the Artist wants to maturate and bring to perfection all imperfect Metals into Gold and Silver, as good as if Nature had done it in the Earth. Now when we open our eyes and look about us, we find nothing else, but an *Acidum* or Universal Agent, that is, the Sulphurous Salt of *Vitriol*, by which all Metals in the Earth are generated, so that some, by a long time are fixed, and some by a less time, partly remain unfixed, according as the Oars contain more or less of this Agent. And if by a strong Fire, one should melt this Metal out of the Oar, the greatest part of the *Acidum*, together with the Rocky part would come into a Cinder or Slate, but in the Metal, although it be melted and hammered, there yet remains some of the Agent, which the Fire, in the first melting, could not separate from it, especially when the Metals are yet crude; as if the Agent should say, I will not be separated from my Patient, for he cannot yet subsist without me, and also saith the Patient, I cannot yet suffer my Husband, or Agent to be separated from me, for we have not been long enough together. But when the melting Fire comes to it again, then no excuse will serve, but the stronger overcomes the weaker, and the Agent and Patient must part by force. Now what in this violent Separation, the one can carry away with it of the other, it leaves not behind, as we see when the Oar of Iron is melted, that the violent Fire, forceth away the Agent from the Patient, and converts it into Cinders, but yet these are not purely Cinders, for they have attracted a great quantity of the *Mercurial* Patient, *viz.* Iron, which is not turned into Cinders, for if they be melted again, you will have a good quantity of Iron out of the Cinders, and this may be done for several times. If the Agent and Patient had not a great Agreement, they would certainly have been more nearly parted in the first melting, and there would be no need of a Second or Third Fire, and if the Agent should be separated from its Patient, by

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the force of Fire againſt its Will, yet it cannot be exactly and wholly ſeparated, but the Patient as the Female *Mercury*, doth its endeavour to retain as much as it can of its Agent, or dear Sulphurous Husband with it ſelf, as we have ſufficiently ſeen, that no melted Iron is found without its Agent or *Acidum*. Which appears, if upon a Plate of Iron, you pour a little Water, it preſently Ruſts, which could not be if there were no *Acidum* in the Iron; for the *Acid* adhering ſo cloſe to the Patient, the melting could not force it away. Now when Rain-water falls upon it, the *Acidum* out of Love attracts it to it ſelf, and works to its utmoſt Power, upon the Patient, ſo that it becomes Ruſty.

Which doth not ſo happen to ſuch Metals, as are already brought to ſufficient Maturity, and therefore have no more need of the Agent, as Gold and Silver, for after they are melted, they do not Ruſt by Wet, for their *Proprium Agens*, or *Vitriolick Salt*, has done its Office, bringing its Patient to Maturity, and therefore is eaſily ſeparated from its Patient in melting. Copper alſo, in melting, ſtill retains ſomewhat of its Agent, and therefore eaſily Ruſts, yet not ſo eaſily as the Iron, becauſe it retains not ſo much of the *Acid* in melting, as Iron doth. Lead and Tin retain leſs of it, than Copper and Iron, and therefore do not ſo eaſily attract the moiſt Air and Rain, but only loſe their Splendour by it. Gold and Silver retain but a very little of it, and therefore they cannot eaſily Ruſt, but being moiſtened with ſtrong Corroſives, loſe their glorious Luſter: *Mercury* retaineth all its *Proprium Agens*, having loſt nothing of it. It is alſo to be obſerved, that although *Sulphur* (which contains in it ſelf a pure vitriolated *Acid Salt*) be an Univerſal Agent, by which Nature in the Earth generates and maturates all the Metals, yet notwithſtanding every Metal hath beſides *Sulphur*, a particular *Proprium Agens*, which aſſiſts the Univerſal Agent in its Action. Gold hath, beſides the Univerſal Agent, ſomewhat of common *Salt*. Silver and *Saturn* have beſides the *Sulphur*, and *Vitriolick Salt*, ſomewhat of *Saltpetre*. *Mercury* hath properly for its Agent, a ſubtil, fiery and concentrated Spirit of *Saltpetre*, which keeps him always fluid and current. And this is the reaſon, that Salts or Spirit of *Salts*, (as Spirit of *Vitriol*, common *Salt*, *Saltpetre*, *&c.*) do more eaſily diſſolve ſuch Metals as participate of their own Salts; for example, Silver, *Saturn* and *Mercury* participate (beſides *Vitriol*) of a nitrous Salt, and therefore Spirit of *Nitre* doth eaſily work upon thoſe three Metals, and diſſolve them: For becauſe theſe three Metals have a nitrous Salt in them, therefore the Spirit of *Nitre* hath a good Friend in them, which opens the Gates to it, and lets it in, for the Friend within correſponds with him which is without, as for Example: If an Enemy ſet down before a Town to take it, and hath good Friends within, that open him the Gates, he may eaſily enter, but if his Enemies that are within defend themſelves, and reſiſt him, he can do nothing, but muſt march off without it. Seeing that an *Aqua Fortis* made of *Vitriol* and *Saltpetre*, doth readily touch and diſſolve only Silver, *Saturn* and *Mercury*, it comes to paſs from their near Relation; but the reaſon why they touch not Gold, is, becauſe it hath no affinity with them, for Gold hath no Spirit of *Nitre*, but of common Salt in it, but if you put a little common Salt to the Spirit of *Nitre*, it then eaſily diſſolves Gold, becomes to be of another Nature, and then will not diſſolve Silver, but Copper, Iron and Tin, becauſe theſe Metals contain much ſpiritual Gold, and therefore are eaſily diſſolved by this Spirit of *Salt*. Now becauſe I have here ſhewn the reaſon, why an *Aqua Fortis* made of *Vitriol* and *Saltpetre* diſſolves only Silver, Lead, and *Mercury*, and not Gold, and when common Salt is added to it, that it diſſolves Gold and not Silver, it is for the ſame reaſon, that Salts diſſolved in Water, and impregnated with the Univerſal *Acid* or Oyl of *Vitriol*, will as well diſſolve the Metals, which are boyld in them, as their Spirits will. For Example: Suppoſe I had no *Aqua Fortis*, and yet would diſſolve Silver; I could do it as well by diſſolving *Salpetre* in common Water, acuated with the true Oyl of *Vitriol*, but yet not ſo eaſily as *Aqua Fortis*, and if you ſhould add a little common Salt to it, it would not touch Silver, but diſſolve Gold. And ſuppoſe, I had no Oyl of *Vitriol*, and yet would diſſolve Gold, I might do it by diſſolving *Saltpetre* and common Salt with Allom in Water; yet not ſo well as by *Aqua Regis*. This is not ſaid to that end, that I would adviſe you to diſſolve Metals by Salts and Oyl of *Vitriol*, (for the diſtilled Waters are better than the undiſtilled Corporeal Salts) but that you may the better underſtand and comprehend with what Salt each Metal hath an Agreement to unite eaſily, that you may the better learn to know the *Proprium Agens* of each Metal, for if you will do any excellent thing, in the Metals by their *Proprium Agens*, you muſt firſt know them well, by which you will know, what every Metal Loves, and how it will be treated: Now we cannot learn this better, than when we conſider, what Spirit, or Natural Agent was driven from the Metal by the melting Fire, which if it had remained longer in it, in the Earth, the Metal would have been maturated by it. We find, that in all Oars of Silver, Lead and *Mercury*, is found a nitrous *Salt*, which is driven from it by the ſtrong Fire, now if ſuch a Metal being immature, and not only taken too ſoon out of its Matrix, but alſo by the melting Fire deprived of its Fecundative Spirit, is to be made grow again to be meliorated, you muſt of neceſſity reſtore that to it, which the Fire hath taken away. Now becauſe from Lead there is taken away a nitrous Spirit, beſides common *Sulphur*, you muſt reſtore a nitrous *Salt* for its Agent. And becauſe from *Mars* and *Venus*, a *Vitriolick Sulphur* was taken away, that muſt be reſtored to them again. And becauſe from *Jupiter*, in melting, an Arſenical *Sulphur* and Spirit was taken away, you muſt reſtore it again to the dead Body, to revive it, and to make it grow. If from Gold its Sulphureous Salt be taken away by melting, which the Gold eaſily lets go for the reaſon already alledged, and yet you would maturate this Gold farther, and make it yet better than Nature hath done, you muſt put it into its Matrix again, uniting it with the Sulphureous Spirit of *Salt*, and ſo let it generate or grow afreſh, and you will receive more than Nature hath given: For Nature can give no more, but a perfect Body, which if you will have yet more perfect, you muſt put it again into its Matrix, with its natural Agent, and by the help of external Fire, awaken or excite the inward natural Fire, that its Body may be maturated into a more than perfect Tincture. For Nature can give no more than perfect Bodies, *viz.* Silver and Gold: But if Art begins again where Nature left, it can make the perfect Bodies more than perfect, with this more than perfect Tincture, you may in a moment bring to perfection the imperfect Metals, if you put it to them in melting: To which perfection, a great many years would have been required, before their *Proprium Agens* could have brought them. For if you would maturate the imperfect Metals into Gold and

Silver, by their proper Agents, it would require a long time, but yet it might be done with very great profit, for no other costs are required, but outward Fire, to keep the inward Secret Fire in continual Action; and this work of maturating the inferior Metals may be done in as great a quantity as you please, which makes the profit so much the greater, and this fixation requires no great Cost, for *Mars*, *Venus*, *Jupiter* and *Saturn* cost but little, and the Agent may also easily be had, so that all the Expence is only the Fire, which yet will not be very chargeable neither, so that this Fixation may every year bring in great profit to him that well understands it. If I was younger I should not forbear to go about this particular Melioration of Metals in the whole, to do good with it to many thousand poor People, but my time is now past. God hath been pleased not to shew me this light till within this three years, in which I have lien in Bed, and so I can expect no great benefit by it, as having no Children who are fit to carry it on. But because I can do nothing more my self, I commit it to others, to whom I have already given a good insight; but to discover it more clearly and indiscriminately to the good and bad, being restrain'd by several Reasons I dare not do it. Now it yet remains to give a hint, how the perfect Metals, as Gold and Silver, must be ripened into a more than perfect Tincture, to make the imperfect Metals perfect by Projection.

Now here followeth a Fundamental Process, without any Legerdemain, how to bring Gold and Silver into a Tincture.

℞. Of Gold j ℥, of Silver iij ℥, dissolve the Gold in *Aqua Regia*, and the Silver in *Aqua Fortis*, pour these two Solutions together, and the Silver will attract the Gold, and they will both precipitate into a gray Powder, but if for want of Salt they should not easily precipitate, pour into them some Salt Water, for the Silver will not fall except there be Salt enough. When nothing more will precipitate, it is a sign that these two Bodies, like Husband and Wife, have embraced each other, and are united; then set the Glass in which they are in Sand, that the Liquor may boil, and those two Bodies will be the better united; stir it often, and let it stand so warm for 24 hours, then let it cool, and these two Bodies will grow up together like Herbs or Flowers, filter the Liquor from the Calx, and sweeten the Calx with Common Water, dry it and powder it well, then it is ready to be fixed into a Tincture with the *Proprium Agens* or Secret Fire. Now concerning the proper Agent of Gold and Silver, I say that it is a Mercurial Antimonial Water, which also *Artephius* Confesseth; To obtain which, proceed thus: First put the Conjunction of Gold and Silver into a clean Crucible, which put into a Coal Fire, so that the Gold and Silver may become warm in the Crucible, and yet not be red-hot nor melt, and the sharp Spirits which remained after Edulcoration will pass away in Smoak; when it Smoaks no longer, take it out of the Fire and let it cool, and weigh the Gold and Silver, and so you will perceive how much heavier they are than they were before, for so much have they taken from the Spirits of the Salts, which dried Salt Spirits must prepare the *Antimony*, our Secret Fire, or *Proprium Agens* to fix the Gold and Silver into a Tincture. For Example: We have dissolved and precipitated j ℥ of Gold, and iij ℥ of Silver, and after the exsiccation of the *Calx*, it weighs vi ℥, and so ij ℥ of the Spirits of the Salts are Coagulated with them, and make the increase. For this you must know, that Silver hath this Nature and property, if it be dissolved in *Aqua Fortis*, and precipitated with Salt it attracts much Spirit from the *Aqua Fortis* and Salt, which Water cannot wash from it; but Gold attracts not so much as Silver, for the Gold attracts *Nitre*, and the Silver Common Salt. I could easily shew the reason of this, but that it would be too tedious. *Saturn* attracts more Common Salt than Silver, and these Spirits of Salts are also a *Proprium Agens* to *Mars* and *Saturn*, as they are to Silver and Gold, and work upon *Saturn* and *Mars*, altogether in the same manner as on Gold and Silver, the only difference is, that the Tincture of *Saturn* and *Mars* is not of that extent as that of Gold and Silver, although both of them in this work have one and the same Agent: Now this Agent which is Spirits of Salts Coagulated, as well in Gold and Silver, as in *Saturn* and *Mars*, must first be brought into a Mercurial Water, before they can rightly act upon Metallick Bodies, by penetrating, maturating and meliorating them; to bring them to which, you must proceed thus: If the four Ounces of Gold and Silver have Coagulated two Ounces of Spirits of Salts, you must add to it two Ounces of very clean and well pulverised *Regulus* of *Antimony*, grind them very well together, put this Mixture into a Coated *Retort*, and distil the Mercurial, Antimonial Water, which will also carry over with it the *Animæ* of the Gold and Silver, in form of Butter of Antimony, yet of a high colour, for the Anima of Gold is highly exalted by the *Antimony*, or Mineral *Aries*. This red Solar Butter is the Secret Fire of *Artephius*, or the *Proprium Agens* of *Pontanus*, to bring the Gold and Silver into a Fixed Tincture, which *Artephius* hath used for Gold and Silver, but *Pontanus* (as appears by his Epistle) did not make his Tincture out of Gold, but out of *Mars*; for he calls God to Witness, that the matter of his Stone, out of which he prepared his Tincture, contained many Terrestreities and Superfluities, which he did not separate from it, and yet the *Proprium Agens*, together with what was good in it, *viz.* Iron, came to be a Tincture. Out of this sufficiently appears, that he did prepare an impure Metal, as *Mars*, into a Tincture.

And this is very credible, for such a fiery Agent which I have taught here to prepare, is as well a true Tincture it self, as the *Animæ* of *Sol* and *Lune*, and that so high that it is sufficiently powerful to penetrate, meliorate, and transmute hard, gross, and impure Metals and Bodies, by its tender, clean, Golden, Mercurial Power, and to reduce them into Tinctures. *N. B.* I would have none to doubt, but that such a clean, fiery, and Golden Agent, when it is used for the exalting and meliorating of clean Gold and Silver, will give a much higher Tincture than with gross and unclean Metals; for if Gold is inwardly so exalted and meliorated by this Antimonial Mercurial Water, it must needs give a far more extensive Tincture. Now how this our Mercurial, Antimonial, Saturnine Water, is to be applied to fine Gold and Silver, to exalt their Colours, and transmute them into Tincture, I shall here shew to the best of my knowledge, and it is thus. The two Ounces of Spirit of *Salts*, which were coagulated by the four Ounces of Gold and Silver, and by the addition of two Ounces of *Regulus* of *Antimony*, did again leave the Gold and Silver, by working upon and dissolving the *Antimony*, and did in the distillation carry over the most pure and tender *Mercury* of *Antimony*, together with the Tincture of Gold, in form of a Red Butter; for *Antimony* is of this nature, that it

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draws the colour out of Gold, and carries it up with it self in Distillation, which the Ancients called carrying the Souls of the Dead out of Hell. This Red Butter impregnated with the *Anima* of Gold, *Artephius* called his Secret Fire, and is the *Proprium Agens* of *Pontanus*, which doth not only maturate Gold and Silver into perfect Tinctures, but also *Mars* and *Saturn*, in their whole substance, without separating the pure from the impure. From the remaining Gold and Silver you must wash your *Regulus* of *Antimony* by the help of Salt Petre, then separate your Gold and Silver by *Aqua Fortis*, and you will have no loss but only of the Tincture of Gold, which the Oyl of *Antimony* hath carried over with it. *Neusementius* calls this his Solar Red Oyl or Butter of *Antimony*, but I call it my Mercurial Antimonial Aurifick Water, which name doth properly belong to it, which I thus prove. Take of this distilled Golden Mercurial Water, of Leaves of Gold and Silver, each equal parts, put them together in a fixing Glass, and set it in a Sand Cuppel, which is heated equally by a dull *Harry*, and kept in the same degree of Fire, and the Mercurial Water will dissolve the Gold and Silver, and they will turn together into a Stone. The Spirits of Salts after they have dissolved the Gold and Silver, together with the Mercury of *Antimony*, will separate themselves by degrees from the *Mercury*, because they are not of the same matter, therefore they cannot become a Tincture with the Gold, Silver, and *Mercury*, which *Pontanus* very well hints. This separation of the Salt Spirit from the Tincture requires its time, and will not be hastened. *N. B.* But if you know how to separate the superfluity of the Spirit of Salt from the Golden Butter, by a subtile Art, and then dissolve your Gold and Silver in it, you will gain a great deal of time in your fixation, for the superfluous moisture very much hinders, which the Ancients have hinted under a Fable, as the Learned *Bracescus* sufficiently admonisheth in his Treatise *de Ligno Vitæ*. This Salt Water is called by the Poets *Minerva*, concerning this you may read the Philosophers, and chiefly *Bracescus*, what he saith *Minerva* was, and you will find which way it must be separated from the Tincture. *N. B.* Be not in doubt, because *Bracescus* teacheth how to prepare his Tincture, not of Gold and Silver, but of *Mars*, for it may as well be made of *Mars*, only that is not so extensive as the Tincture made of Gold, otherwise the labour is the same, and differs not at all. I repeat this once more, that if you will shorten your labour, you must send away *Minerva* in peace, because she hinders the fixation. Some perhaps may wonder, what the Silver can contribute to this Tincture, because it is white, and hath no colour: I answer, that the inward parts of Silver are not white but red, and therefore may become a Tincture. After the same manner *Saturn* is not red outwardly, and yet with *Mars* becomes a red Tincture, as Silver doth with Gold. This I thought fit to say here concerning the Secret Fire of *Artephius*: If you will know more of it read *Artephius*, *Pontanus*, *Paracelsus*, *Bracescus*, *Neusementius*, *Cosmopolita*, and others, who have made mention of it, and you will there find larger Instructions.

Now as it is possible to transmute not only Gold and Silver, but also the other inferior Metals into Tinctures, by the *Proprium Agens* of Metals, so you may also fix into Gold and Silver, the inferior Metals particularly, with an incredible profit, for the inferior Metals may be put in in great quantity, with a cheap Agent, and so be maturated into Gold and Silver, which hitherto hath been known to very few in the World, but I do not doubt but hereafter it will be better known, by which many honest Men will be delivered from Slavery. For as you have already heard, the *Proprium Agens* of the inferior Metals is cheap, so that the imperfect Metals may be with small costs, by the addition of their Natural *Proprium Agens*, which was driven away in their melting, by the help of External Fire, maturated into the perfection of Gold and Silver. *N. B.* If you can have Metals yet in their Oar, that have not been in the Fire, and add to each of them their *Proprium Agens*, and put them in close Vessels into a fixing Furnace, and maturate them with a requisite heat, then the fixation will the sooner be done, than with those Metals which have been already melted; yet those Oars must be well washed and separated from their Mine-Earth, before you put them with their *Proprium Agens* to be fixed. *N. B.* This fixation of the unripe Metals into Silver and Gold, as also of Gold and Silver into a Tincture, by their *Proprium Agens*, may also be done by the humid way, if you dissolve your Metals in their proper Menstruums, and then digest them for a sufficient time. *N. B.* For such a moist digestion or fixation Vegetables are more fit than Minerals, and Animals fitter than both, yet all of them be made use of to fix both the common, and Metallick *Mercuries*, as well universally into Tinctures, as particularly into Gold and Silver. But for the course Metals and their Oars, the universal Agent, *viz. Sulphur*, *Arsnick*, with their Compeers, as Cobolt and Orpiment are the fittest. Gold and Silver have also their peculiar Agents, by which they are maturated into Tinctures, of which the Animal Agent is found to be the best, for it is of this nature, that it turns the inward hidden colours of Gold and Silver outwards, and renders them visible, which no other universal subject can do like it. For if you cannot bring outwards the inward colour of Gold and Silver, it is impossible to make Tinctures of them. For Gold and Silver, as nature hath produced them in the Earth, have no abounding colour to tinge other Metals withall, but no more than is required for their own perfection; but when they are exalted in their Colours by Art, they are able plentifully to communicate their Colours to other Metals, but else not. Now what kind of Animal Agent this is, by which the Exaltation of Colours may be made, I dare not make common; he that will know more of it, must enquire of *Adam*, who brought such an Essence with him out of Paradise. You may also read my *fifth Century together with the Explication*, where this Subject is treated of. Now as the *Proprium Agens* of the Metals, which is their Spirits, *viz. Sulphur*, *Arsnick*, *Cobolt*, *Orpiment*, and the like Metallick Spirits, are fixed with the Metalline Bodies, and with them become fixed Metals, because they are half Metals already, so on the contrary, Salts which also are good Agents to Maturate Metals, yet become not Metals themselves, as *Sulphur*, *Arsnick*, *Antimony*, *Orpiment*, *Cobolt*, *Zinck*, *Bismuth*, *Lapis Calaminaris*, and other Realgars or Metallick Spirits; for Salts do not participate of a Metallick Nature, therefore they cannot become Metals; but when they touch, dissolve, volatilise, and again fix Metals, it is only done by their Acidity, which is a kind of that Acidity which is naturally in Metals, and this is to be understood of Common Mineral Salts, as Common Salt, Salt Gem, Salnitre, Allome, Vitriol, and the like, which naturally grow in the Earth, in Stones, in Rivers, and also out of the Earth, which are dug out by Men and purified, and so imploy'd for several uses. These Salts have a great affinity with the Metals, but

cannot become Metals. But the Vegetable and Animal Salts are of another nature and property, they associate themselves with Metals, because they somewhat participate, though but little, of the Metallick nature. The Animal Salts are principally Volatile, and make a good *Sal Armoniack*, which hath a great affinity with the Metals, as I have in my Writings sufficiently shewn. The Salts of Vegetables are altered in the Fire, and become fixt Alcalies, which are also of good use to Metals, as you may see in my Writings. But the Volatile Salt of Animals far exceeds all other Salts, in its virtue; for it makes not only all Metals, how fixed soever they are, wholly volatile, and separates the cleanest Tincture of Metals, Minerals, Precious and ignoble Stones, that is, it separates their immortal Anima from their gross and unprofitable Bodies, with which you may perform incredible things, both in Physick and Alchymy; But this wonderful Salt also makes the most subtile, as well good as bad Spirits, incredible quick, surmounting Human Understanding, visible, tangible, Corporeal and fixt, which concentrated and fixed Spirits, have ingress and egress through Doors lockt up, by which strange and incredible things may be done. So great a power hath the Almighty bestowed upon the Animal (chiefly the Microcosmical Salt) above all other Salts, which is known to few. For the Microcosmical Salt, and for want of that, the Volatile Salt of other Animals, Birds, Fishes, as also of Herbs and Woods have power to volatilise all fixed things, and again to fix the volatile. In which volatilising, the purer parts are separated from the grosser, the which being fixt again, you have a Tincture, and there is no neater, easier, or cheaper way in the World to attain to true Metallick Tinctures, than by the means of Volatilising Salts. Take a similitude from the Spirit of Corn or Wine, so long as it is yet in the *faces* of the Corn or Wine, it is little esteemed, but when it is driven out by Distillation, and cleansed by Rectification, and so exalted in its Virtue, then it is Esteemed, because much good may be done with it. So and no otherwise you must esteem of Metals, in which such rare Tinctures are hidden, which then are not esteemed, because few know what great things may be effected by them. The like great treasures are also hidden in great quantities, which by the Ignorant are not esteemed or sought after, notwithstanding that the Ancient Philosophers have highly recommended to us the Extractions, Distillations and Separations of the noblest Tinctures to be drawn out of gross despised Metals and Stones, yet their profitable Doctrines and Admonitions have taken with very few.

Basil Valentine confesseth in his Manuals, that the Work of the Philosophers can be compared to nothing better than to the known labour of making Spirit of Wine, which preparation is known even to Rusticks. The distillation and separation of the Tincture of Philosophers is as easie as to make Brandy, and yet it is done but by very few.

Paracelsus in his *Cœlum Philosophorum*, speaking of the Spirits of Metals, saith plainly, that it is so easie to make Gold and Silver, that it is not worth while to write of it. *Virgil* also sheweth, how easie a thing it is to pluck the Golden Branches from the Opake Tree of *Vitriol*, and how easily they will follow one another, if you but hold forth your Hand, and when you have cropt one, he bids you also take a second. What could be said plainer? But yet I tell you, that these Golden Branches are much more easily, and in greater quantity to be obtained out of the Red Earth or Stones, than out of Metals; but he that will not believe it, may remain in the dark. It is enough for me, that I have plainly declar'd the truth to the ungrateful World, without any reservation. But our *Sal Armoniack* (I do not mean the Common) is a good *Proserpina*, which easily carries over the Tincture of Stones and Minerals. And he that will pluck these Golden Apple bearing Branches with profit, must very well consider after what manner to prepare his *Proserpina*, that she may touch and carry over only the cleanest Tinctures, and leave the gross Bodies behind. The Artist must also be sufficiently experienced, how to separate *Proserpina* or *Minerva* from the Extracted Tincture, for *Minerva* is a hinderance to the fixation of the Tincture. And this is the principal secret in this Mystery. For all Tinctures of Metals and Stones, after they are separated from their gross Bodies, by our *Proserpina*, they are volatile, and so remain till they are separated from our *Proserpina*. Although *Proserpina* is a two fold Key, which both opens and shuts, makes volatile and fixed, yet this is to be observed, that there are but very few who know how to use this Volatilising and fixing Salt; and therefore I advise to separate it from your Tincture, and then fix your Tincture. But if God shall so favour you, as to shew you how to fix this *Proserpina*, or, to speak plainer, our secret *Sal Armoniack*, with this Tincture which it hath drawn out of Metals and Stones, both together without any separation into a fusile, red, penetrating, and tinging Stone, then you may for that bless God all your life, for you may have always plenty, without any want, for there is no richer particular, nor universal Tincture in the World.

For what can be a greater Art than by the help of our *Sal Armoniack*, in a few hours, to draw a pure Tincture out of gross Metals and Stones, to bring it over by Distillation, to purifie it to the highest by Rectifications, and then again to render those Volatile Tinctures in a few hours, fixt and constant in the Fire, so that by them you may immediately tinge the inferior Metals, particularly into good Gold? I *Glauber* truly say this, that this highly profitable Labour, to draw the Tinctures out of Metals and Stones, by the help of our *Sal Armoniack*, to exalt them, and again to fix them, requires hardly twenty four hours time from the beginning to the end. Which to the unskilful will seem incredible, but whether it be believ'd or no, is all one to me. It is the Will of God, that his great Gifts shall not come among the impious, but only remain among those, whom he esteems worthy of those high Secrets, and them who also will make good use of them. *Virgil* at first gave but a hint of it in few Words. Afterwards *Cosmopolita* did explain this great Work at length. Then *Neusementius* published it yet plainer, but the Work is most clearly and largely described in all its Circumstances, by the pious *Brasescus*, in his *Dialogue de Ligno Vitæ*, but it is received by very few, because the proud *Toletanus* despised this cheap Martial Labour, as if *Mars* contained no good at all, but that it was only to be found in Gold and Silver. I ingeniously confess, that I am acquainted with several good Secrets, by which one may reap Profit out of Metals, yet none of them is cheaper and easier, than the Work of *Virgil* upon *Vitriol*, or the *Opake* Tree, to break off the Golden Branches one after another, by the help of his *Proserpina*, or *Eagles* Wings, or *Griffins* Claws. But if one would reap good Profit by this Labour, he must be furnished with a good quantity of *Griffins* Claws and *Eagles* Wings, which also is easie to be had in great quantity, for I have sufficiently

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taught how to prepare them. Further, it is needful to know, after we have drawn the Tinctures, out of Red Metals and Stones, by our *Alcaheſt*, how to perfect them, becauſe they are yet Volatile, no Metal can be meliorated by them, therefore they muſt be fixed before they can be uſed. This Fixation may be made in the ſpace of ſix hours, ſo that theſe Tinctures retain their ingreſs and fuſibility, ſo that if they are put upon a red hot Plate, they melt in a moment, enter and tinge as readily, as Oyl doth dry Leather; which all Tinctures do not, but muſt be brought to it by Art, but our Tincture only which is made by Volatile Spirits, doth it: The reaſon is this, all groſs and and fixed Bodies are naturally influxile, on the contrary, all Volatile Spirits again Coagulated into fixed Bodies, muſt of neceſſity be fluxible and penetrating. Obſerve this well, for it is plainly enough ſpoken. Concerning this, ſee the *Epiſtle of Arnoldus* to the Pope, and there you will find this Obſervation. Without this Secret *Sal Armoniack*, no good can be done in *Alchymy*. Thus I end my Explication of the Secret Fire, by which all Metals particularly and Univerſally, are maturated, with incredible Profit, to the perfection of Gold and Silver. Now it remains to give ſome hint, how theſe Secret Fires or Agents, ſeparately by each *Proprium Agens*, may be after a peculiar manner, maturated into Tinctures. You have heard that common *Sulphur* is the *Proprium Agens* of *Saturn*, which becomes fixed with the Lead, and in this Fixation it alſo fixeth and tingeth its Patient the Lead, into ☉ and ☽. You have alſo heard, that *Arſenick* or *Cobolt* is the *Proprium Agens* of Tin, and that *Arſenick* the Agent is eaſily fixed by its Patient, Tin, and with the Tin becomes ☉ and ☽. And alſo, that the common ☿ is fixed into good Silver, with Lead. And all Volatile *Realgars*, as *Orpiment* and its Compeers, may be fixed into good Gold with ♂ and ♀, which is the naked Truth, of which I would have none to doubt, for I my ſelf have ſeveral times performed theſe cheap Fixations, and becauſe I am ſufficiently ſatisfied in it, I dare ſatisfie others.

I have thought it unneceſſary to deſcribe, at large, all the Manuals which belong to this cheap Fixation of the inferior Metals, and alſo to the Coagulation of the Volatile mineral Spirits, into conſtant Gold and Silver. I have therefore publiſhed it as ſhort (yet comprehenſive enough) as I could, that you may ſpeculate into it your ſelves, and then you cannot fail, except God prohibit you, which often happens to evil Men, which ſee eaſie things done before their Eyes, which yet they cannot imitate. Now to put an end to this buſineſs, and to prove that the Univerſal Agent, the common *Sulphur*, which is the Grandfather or *Demogorgon* of all Minerals and Metals, hath alſo its *Proprium Agens*, by which it may be maturated into a Univerſal Medicine or Tincture, I have thought fit to acquaint the World with this eaſie and cheap Fixation of *Sulphur*; chiefly, becauſe I have already, ſome years ſince, treated of this eaſie Fixation of *Sulphur*, but I have not there diſcovered every thing ſo plainly, that every one may prepare it. But now I intend, God willing, to publiſh it ſo clear and comprehenſive, that even any *Mechanick* may not only underſtand, but eaſily imitate it. I pray God to aſſiſt me in it, *Amen*. Some years ago I taught, how, by the help of my *Sal Mirabile*, to fix any common *Sulphur*, but chiefly, ſuch as is yet bound up in Wood or Sea-Coals, and doth not ſo eaſily fly in the Fire, but is eaſier to be handled with a red hot heat, than the open Fluxile common *Sulphur*. This curious Work I have ſhewed to ſome Friends with my own hands, and highly recommended it to them, to take it in hand, and bring it to a good end, becauſe I was certain, that it muſt become a rich, and far extending Tincture. But ſeeing the *Sulphur* would not preſently be fixed, they left the Work: Whereupon I farther divulged this Work by writing, and made it common. Notwithſtanding which, as yet very little hath been attempted about it, becauſe every one is in haſte, and hath not Patience to wait for a good end, not conſidering that every thing muſt have its time, and that haſte makes waſte. Muſt not the Plowman, when he ſows his Corn into the Earth, to have an hundred fold encreaſe, wait the due time before he can have this Multiplication? Why ſhould not then alſo a *Chymiſt* wait his time, for this profitable Fixation, that will recompenſe him a thouſand fold? Now to return again to our buſineſs, to ſhew that any common Combuſtible *Sulphur*, which otherwiſe is an univerſal Agent for all Metals, to maturate them into Gold and Silver, hath alſo its own *Proprium Agens*, by which it is not only maturated into ☉ and ☽, but alſo into a true univerſal Tincture; and this is done only by certain *Salts*, that have Power to fix the *Sulphur*, and make it conſtant in the Fire. *Coſmopolita* minds us of this very well, when he ſaith, that Salt, in the conflict with *Sulphur*, gave him a deadly Wound, which is very true, and beſides Salt or ſtrong Spirit of *Salt* hath Power to fix it, if they be ſeveral times drawn off from it. How this is to be done, I have taught in my *Three Principles of Metals*. But ſuch a *Sulphur* as is fixed by *Aqua Fortis*, is alſo quite killed, and its ingreſs into Metals is taken away, but may be reſtored to it again, ſo that it eaſily enters Metals, and tingeth them throughly. *Paracelſus* ſaith, you muſt reverberate the fixed ♃, till it comes to be Red, and then draw out the Tincture, with Spirit of Wine, and then fix ☽ or ☿ with it into Gold. *Neuſementius* teacheth to drown the Dragon in the *Stygian* Waters, that is to fix him, and when he is come to the higheſt degree of fixity, that then you muſt revive, or Volatize him again, and then fix him the ſecond time, and then he hath a better ingreſs into Metals to tinge them. *Braceſcus* teacheth alſo, to extract his fixed *Sulphur*, out of the fixed Scales of Iron, and to fix them into a Fluxile and penetrating Tincture. *Coſmopolita* teacheth it after this manner, *viz.* how to deliver *Sulphur* out of his Priſon, and that he will give to his Redeemer a Crown of Three Kingdoms for a Recompence. Out of theſe, the true Fixation of *Sulphur* is ſufficiently to be learned, and needs no farther inſtruction, but yet I cannot forbear here to ſet down my way, how to fix it, that the Artiſt may ſo much the eaſier attain his End. And this Fixation of *Sulphur* may be done after ſeveral manners.

And Firſt in this: I have taught, how *Sulphur* may be fixed into a Red Carbuncle, perſiſting in the Fire, where I have treated of my *Sal Mirabilis*: It is true, this way of fixing is done without any coſt, yet it requires a certain, tho no very long, time, which is the reaſon, that hitherto few have tryed any thing in it, and yet it is very difficult to come eaſier and cheaper to the Fixation of *Sulphur*; and beſides, there is this advantage in fixing the *Sulphur* with the *Sal Mirabile*, that it retains its eaſie Flux and Ingreſs into Metals, which that fixed by *Aqua Fortis* doth not, but into an unmeltable Earth, which hath no ingreſs into Metals except it be procured by Art, which every one cannot do. Yet *Neuſementius* hath clearly deſcribed it in theſe Words: When thou haſt brought thy Subject to its higheſt Fixation, to wit, by the Abſtracti-

on of *Aqua Fortis*, (which Fixation he also clearly teacheth, when he saith, that you must drown the Dragon in the *Stygian* Waters, and so make him fixed) and after the Fixation make him Volatile again, that then he acquires his ingress, and is fit to tinge, which is so plainly exprest, that it is impossible to express it plainer, yet these excellent Writings, are written only supervacaneously, and understood and imitated but by few. I still add even to superfluity, one way more how to fix any *Sulphur* whatsoever, to do wonders in Physick. ℞. Sea-Coals, or in defect of them, Wood Coals powdered, good *Saltpeter*, Common Salt, and Oyl of *Vitriol*, of each a like quantity, put these four things into a Glass Retort well coated, fix a Receiver to it, and in an open Fire distil off all the Humidity, urge it at length with the strongest Fire, and a Green Liquor of *Sulphur* will come over, which the Ancients called the Green Lyon, which dissolves ☉, and when they are digested a good while, or the Green Liquor is often abstracted from the ☉, then they are fixed together, and the Liquor of *Sulphur*, together with the ☉, turns into a Red tinging Stone. *N. B.* If you will that the *Sulphur* shall not come over, but remain fixed behind, you may instead of the common Salt, which makes the *Sulphur* Volatile, put *Saltpetre*, which is of this Nature, as well as Oyl of *Vitriol*, to make any *Sulphur* fixed, but common Salt makes it Volatile. *Jason* killed or fixed the always watching Dragon with a strong Water of *Saltpetre*. *Bracescus*, *Basilius*, *Paracelsus*, *Neusementius* and others have done the like, he that will truly follow them; cannot err, but it is impossible to explain to the ignorant any thing, so that he may presently imitate it. You must yourself take the thing in hand, and proceed diligently, else nothing can be done: Let this suffice to be said concerning common *Sulphur*, which is an Universal Agent, to maturate all Metals, and it self is fixed with Metals, into ☉ and ☽; and also by *Saltpetre* and *Vitriol* is fixed into a true Tincture, as is here demonstrated. Here I put an end to the Explanation of the Agent, and Patient of Metals, how to fix them particularly into Gold and Silver, and Universally into Tinctures. It yet remains to give a small Explication of the Fixation of *Sulphur*.

A RECAPITULATION

Reader,

I Have taught in this Book, what the *Proprium Agens* of Metals is, by which they are naturally maturated in the Earth, *viz.* That the *Demogorgon* or *Sulphur*, is not only the Father of all Metals, but also their Universal Agent, or Maturating Fire, by which all the Metals naturally in the Earth, and by Art out of the Earth are brought to perfection, and that also besides *Sulphur*, as the Universal Agent, the Metals have their particular, or proper Agents, which help to bring the Metals to perfection, as well as the Universal Agent. I have also taught, that the Volatile Spirits of Metals, or their proper Agents, do not only maturate their Metals, but also become good Bodies themselves with the Metals. I have also taught, how *Sulphur*, as a Universal Agent chiefly by Salts, may be maturated into a Tincture, which Fixation by Salts, must have its due time, before you can make it constantly fixed in the Fire, which length of time hath made many Artists forsake the Work, altho' he knew, that of necessity it must come to a good Tincture. Impatience causeth this, that they cannot wait the true time of the Harvest. Wherefore impatient Men should not meddle with *Alchymy*, but rather drink a Bottle of Wine, which is sooner done than a Combustible Fugitive *Sulphur* can be fixed. The learned Ancients have taught us, that Patience is the Root of all Sciences and Arts, wherefore then are Fools so hasty in their Undertakings? When all Philosophers Unanimously testifie, that all Festination proceeds from the Devil. *Paracelsus* hath taught how to fix *Sulphur*, by the help of a strong *Aqua Fortis*, by abstracting it from it four or five times. But I have taught, how to fix it by the abstracting of a strong *Aqua Fortis*, but once, in my Book *of the Three Principles*: 'Tis true, by this way it loseth its Fluxibility and Ingress, but this may be restored to it again, which for certain Reasons, I did not think fit to make known. Now being we know, that nothing fixeth but *Sulphur*, and that a Combustible *Sulphur* spoils the Metals, and makes them Black, and a fixed one hath no Ingress, but when that is given to it, it is fit to tinge the Metals, for whatever tingeth the Metals constantly, must it self be fixed, or else it would not endure the *Cupel*. 'Tis true, out of *Mars* and *Venus*, you may easily extract a Tincture, which yet doth not tinge constantly, except they be first truly fixed. Very many have thought, that if they could but incorporate a *Crocus Martis* with Silver, that of necessity it must become Gold, but they found themselves to be mistaken, for if *Crocus Martis* should be put upon Silver, it doth not tinge it at all, but again becomes Iron, and makes the Silver brittle. *N. B.* But if you know how to prepare a Red *Sulphur* of Iron, constant upon the *Cupel*, without returning to Iron again, and then draw out of this Red fixed *Sulphur*, its purest Anima or Tincture, you have a Colour to tinge all the Metals in the World. This is the Reason, that the Old Philosophers have so often inculcated, to destroy the Gold: So that it cannot be reduced into Gold again, and that then you would have the greatest of Secrets. But I could do nothing more with such a destroyed Gold, till I learned to give it ingress, for when it is destroyed it enters no Metal, but if you give it ingress, then it tingeth, so also neither *Mars*, nor common *Sulphur* can tinge, if they have no ingress which you may easily believe.

Therefore the whole Art to make Tinctures consists, first in making of the red Metals as Gold, Iron, and Copper, irreducible, then to extract their Tincture, and to give an Ingress. This labour is a very easie thing to the knowing, but incredible to the unskilful; for I have some years since, shewn to some Friends out of kindness the destruction and fixation of such Metals, together with the Extraction and Ingress, very plainly, and highly recommended to them this universal work; they have performed the fixation, but the Extraction and Inceration they have not done, although it is so easie that a Child of Ten years old may easily perform it. My hopes were, that when they had perfected it, they should give me some of the Tincture, but in stead of a recompence, they told me they could not do it, which was because God kept his hand over it. After the way that is here shewn, Tinctures may be easiest prepared out of red Sulphureous Metals and Stones, and I have a small quantity of it by me, which will tinge red, I made it before my Sickness, and keep it as a memo-

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rial to my Posterity. Some perhaps may ask, whether there be not a nearer way to prepare Tinctures for Metals, than by Extractions and Fixations, which require much time and Costs. I answer, 'tis certain there are nearer ways to fix *Sulphurs* in their whole substance without loss of weight, without any addition of Salts or Spirits of Salts, very easie and cheap, *viz.* by the Universal Coagulator into a Tincture, and by their particular Coagulators into Gold and Silver. Concerning the Coagulators I have already made them known, *viz.* that Lead is the Coagulator of Common *Sulphur*, and Vulgar *Mercury*, Tin is the Coagulator of *Arsnick* and *Cobolt*, Iron and Copper are the Coagulators of *Orpiment*, *Sandarach*, and all other Realgars, and that Gold and Silver are the Coagulators of the *Mercury* of *Antimony* into a Tincture. Now concerning the Universal Coagulator, 'tis not a Malleable or fusible Metal, but only an immature Volatile Mineral, not much unlike to Lead Oar, and therefore the Philosophers have called it the *Saturnine Magnesia*, and this is not all one and the same, for it is found in different colours and figures, so that he who will use them must well understand their difference, that he may not take the wrong for his work, and so lose his labour. The Ancients have not revealed this Volatile Mineral, but kept it as a Universal Coagulator in the greatest secrecy, and that not without reason, because they maturated their Volatile Metallick Spirits and Tinctures by it. Yet the Volatile Tinctures may also be fixed, without this Universal Coagulator, but that requires much time; therefore they have used this Coagulator for an help, and so they could maturate the most Volatile Metallick Spirits into fixed Tinctures, in a short time, and this Compendium is the chiefest thing in the Chymical Art, see the Treatise of the *Three Principles of Metals*. Now to return again to *Sulphur*, and to demonstrate, that it may be easily made fixed in the Fire, which is thus: Take one part of Common *Sulphur*, mix it with three or four parts of Lead Ashes, put this mixture into a strong Earthen Cementing Box, lute it well with a good strong Lute that will not crack, when the Lute is dry, put it into a Cementing Furnace, or into such a Fire, that in the beginning will only melt the *Sulphur*, so that it may penetrate the Lead Ashes, and hide it self in them, and so be initiated to the Fire, then by degrees increase your Fire from day to day, till at length the Crucible become to be of a dark brown, then increase your Fire still more, and continue this so long till the *Sulphur* becomes quite fixed with the Lead Ashes, and constant in the Fire; and this will require eight or ten months time, during which time the *Sulphur* becometh fixed, and hath tinged and fixed its Body, the Lead as much as it could, for it is not possible for it to fix all the Lead after this manner into Gold and Silver, but only part of it, yet so that an hundred-fold profit is made of it, if you proceed rightly in the matter. The reason of the melioration of the Lead is this: If *Saturn* hath power to make a Combustible *Sulphur*, incombustible and fixed in the Fire, so that it neither fumes nor burns, then it is certainly as good and fit for tinging as another *Sulphur*, which is made fixed by much labour of abstracting *Aqua Fortis* from it. In this Fixation the *Sulphur* retains its Ingress, and therefore needs not to be given to it afterwards, for it had an Ingress when it was not fixed, and when it is made fixed it still retains it. This makes good that common saying of the Philosophers: If *Sulphur* shall first penetrate *Saturn*, and *Saturn* attracts it willingly by reason of its great dryness, and unites it self with it, then it is said that *Nature rejoyceth in Nature*. When it can be made red-hot with the Lead, then it is said, *Nature overcometh Nature*, but when the fixed *Sulphur* remains constant with the Lead upon the *Cupel*, then it is said, *Nature retains Nature*. This which I here declare so plainly, all Philosophers before me have kept very secret, but that I here reveal such great secrets, I have a reason for it, which is not necessary for every one to know. Now as we have here taught the fixation of *Sulphur* by Lead, after the same manner the fixation of *Arsnick* is to be done by Tin, which becomes fixed with it in the Fire, to the great profit of the Artist, it recompenseth him with Gold and Silver upon the *Cupel*; and this Work the Philosophers always kept very secret. *Cosmopolita* writes, that there is a small Fish in the Sea named *Remora*, which hath such power, that if it sits upon the Stern of the Ship, it causeth it to stand still, so that although the Wind fills the Sails, yet it cannot move. In another place, he calls this Fish *Echineis*, which if you read backwards, sounds Tin Ashes. Other Philosophers also write of this work of Fixing, that there are always two sorts of Birds in the Nest, or two sorts of Dragons in the Den, that one of them would willingly stay, which is the Body, but the other which hath Wings, would always fly away, yet at length it is by degrees so overcome by that which hath no Wings, that at last it endeavours no longer to fly. The same happens here to our Volatile *Arsnick*, that is, with the fixed Tin Ashes, the Volatile part *Arsnick* is always striving to fly away, but the Tin Ashes binds and keeps it, that it is forced to stay against its will, and also become fixed with its Companion. Now as we have here proceeded with *Arsnick* and *Tin*, and with *Sulphur* and *Lead*, after the same manner must be done with *Orpiment*, and *Mars* or *Venus*, but with *Sulphur* and the *Mercury* of *Antimony*, together with Gold and Silver, the fixation is performed after a peculiar manner, which fixation I have already declared, and therefore need not repeat it. This I would have noted concerning the Agents and Patients of Metals, but I am very well assured, although this fixation is very mean and easie in it self, that yet it will not easily be imitated, and that because I have made known so great a Secret in so simple and mean a Style. The World is full of Pride, and cannot give credit to such mean things, but rather looketh after high, tedious, and sophisticate things, which are worth nothing, if they are but set off with fine words; God will have it so, that these great Secrets may not fall into the hands of the Impious. Here, in the fixation of the Common *Sulphur* with Lead, and *Arsnick* with *Jupiter*, *Orpiment* with *Mars* and *Venus*, I have spoken openly, and hid nothing, yet I am certain it will not be taken in hand, partly because of the length of time required in the fixation, which will deter many from this work, many who shall read it will not be able to believe, that so easie a fixation hath been done, because none hath hitherto written of the like cheap way of Meliorating Metals, nor spoke so plainly as I have done. Many will take Exceptions at my Person, and say, if it was true what *Glauber* writes of the easie fixation of the inferior Metals, to transmute them into Gold and Silver, he would do it himself, and thereby make himself rich, and not publish things of so great a concern. To this I answer, that my great Age, and many weaknesses will not permit me to take such things in hand,

by

by which nothing but Worldly Riches are acquired, which sometimes do Men more harm than good, which I never did nor ever will seek after. If others will do it, they may. I trouble not my self about the Mammon, but prepare my self for a happy passage into a more peaceable Life, where there is no strife nor misery, but everlasting Peace, and everlasting Light reigns perpetually. But in that I have discovered these great Secrets, by which those who seek after them, may become very rich, I have done it out of a good meaning, *viz.* that if many by this shall attain good means, that some of them at least may assist the poor out of their abundance. To this end only have I discovered these Lucriferous Secrets, and not at all to please the Proud and Covetous. But yet although I have described all plainly without any reserve of the Manuals thereunto belonging, I am very well satisfied, that God will keep his hand over it, and will not indifferently give his Blessing to all in it, but will so dispose it, that his gifts may not be misused. And therefore I am very well satisfied, that Art will remain Art, although it be never so clearly laid down before the Eyes of all Men. To whom God will give it, him I envy not, but wish him Gods Blessing with it, and earnestly exhort him, that when God hath blessed him, that he by no means forget the Poor. *Amen.*

A

TREATISE

CONCERNING

The Animal-Stone:

OR,

Of that Animal Matter or Subject which God ingrafted into Adam *and* Eve, *as a Divine Portion or Patrimony in Paradise, and which he still retained after his Fall and Banishment out of Paradise, brought it with him thence, and after Death took it along with him to his Grave, or to the Earth from whence he was taken and made; What kind of Matter properly it is, and in what manner a true Universal Medicin may be made of it. Faithfully Translated out of the* High-Dutch.

The PREFACE.

Curteous READER,

HAving in some of my last Published Writings, and especially in my Fifth Century, treated of a certain Matter, called by the Ancient and Modern Philosophers, The Philosophers Stone, *which Matter they say, God implanted in the first Man* Adam, *and which after his Fall and Banishment, he brought with him out of Paradise, and after his Death, took it along with him to his Grave, without revealing this Divine Patrimony and Portion to any of his Posterity; so that this great Treasure continued for some time hidden from the wicked World, until at length it pleased God to open the Eyes of some honest Men to know and discern this great Gift of God, which they also made known to others, though this communication of theirs was of little use to proud Worldlings, whose Eyes are only fixed upon outward Visibles, not minding the inward Invisibles. Wherefore none of them could believe, that so great a Treasure was hid in Sinful Man, as accounting nothing worthy their esteem, but Gold, Silver, and Precious Stones, and casting out upon the Dunghill as loathsom and contemptible what is far better than Gold or Silver.*

And

And becauſe ſome of my Enemies have ſlandered ſome of my Writings, as if they contained abſurd and impoſſible things; to the end that none by their Lies and Slanders may be led aſide from the way of truth, I am reſolved to ſet the Truths I have written in a greater Light, and palpably to evidence before the whole World, that what I have taught, viz. *that a Mineral Aurifying Virtue lies hid in Vegetables and Animals as well as in Metals, is no abſurdity, but a great truth, to the ſhame and confuſion of my envious Adverſaries.*

O thou Eternal Light, without the leaſt mixture of darkneſs, Creator and Governor of Heaven and Earth, ſend down upon me thy holy Spirit, beam into my Soul a Ray of thy Heavenly Light, that it may enlighten my Heart, Brain, and Underſtanding, that I may write nothing but what may ſerve to thy Glory, the ſalvation of my Soul, and the enlightning of many thouſands that wander in the darkneſs of Error. Amen.

OF THE ANIMAL-STONE.

IN the Name of the moſt Holy Trinity, I undertake to communicate and declare to the dark wicked World, the great Wonder-works of God, and Myſteries of Nature, and that with ſo much clearneſs and evidence as never hitherto hath been done by any; ſo as not only the good, and ſuch as are taught of God, but alſo the perverſe Worldly Learned, or the moſt ignorant Ruſtick may comprehend, underſtand, and even handle with their Hands, that I have fundamentally declared and manifeſted the Myſteries of God and Nature, to the glory of God, and good of Mankind.

In order to perform the great Work I have undertaken, it is needful that we know firſt, what the thing is, we are to ſeek, and next, where we are to ſeek for it. The thing we ſeek for, is the Philoſophers Stone, which affords the Poſſeſſor thereof health of Body, and an honeſt plentiful Maintenance. Now foraſmuch as moſt of the Ancient and Modern Philoſophers, a few only excepted, point us to Metals, and eſpecially to fixt *Sol* and *Luna*, thence to procure for our ſelves this great Treaſure, though they handle this matter with ſo much obſcurity, that amongſt an hundred thouſand Seekers, ſcarcely one is found that attains to his deſired End, moſt of them beſides ſpending their Goods and Eſtates in the fruitleſs purſuit of this hid Treaſure; whereof thoſe in a great meaſure are guilty who perſuade Men that *Sol* is the Subject of the Philoſophers, and that all other matters are improper and unfit for their Work; But others again inform us, that this great Treaſure may be obtained a nearer, eaſier, and cheaper way, without *Sol* or any other coſtly Subjects; Concerning which cheap, and every where to be found, Subjects, I have made mention in ſome of my late publiſhed Writings, and particularly in my Fifth Century, yet not ſo plainly as wholly to expoſe theſe Pearls to ſwine, for them to tread them under their Feet. And foraſmuch as ſeveral ignorant and envious Perſons have taken occaſion to appear and contradict theſe my Writings, as if it were impoſſible to find Mineral Virtues in Vegetables or Animals, I am moved to ſtop the Mouths of theſe envious and ignorant Back-biters, and to expoſe them to the Publick ſhame of the World. I confeſs, I do not think theſe Slanderers worthy that I ſhould take any pains to confute or convince them of their Error, becauſe I am not to mind what ſuch as they, but what honeſt Men, and what truth it ſelf, ſpeaks. But becauſe this demonſtration may be of uſe to undeceive and inform many Seekers after this Treaſure, I ſuppoſe I ſhall do a good work, in giving this evident teſtimony to Truth, whereby not only the Mouths of Slanderers may be ſtopp'd, but the Eyes of the Deceived may be opened to diſcern the Truth.

We proceed then to hear the Verdict of Truth in this Matter, whether indeed ſuch a Mineral Virtue be hid in Vegetables and Animals, as that the Philoſophers Stone may be prepared of them. And firſt we will ſpeak of Man, as being the Nobleſt of all Gods Creatures, and then proceed to the four-footed Beaſts of the Earth, the Fowls of the Air, Fiſhes in the Sea, and all Creeping Things, and laſt of all to Trees, Plants and Herbs, to ſee what the Almighty Power of God hath laid up and hid in theſe for the uſe and welfare of Mankind.

As to Man, the moſt Excellent part of Gods Creation, whom God made a Ruler and Governor over all his Creatures in Paradiſe, we know that he was made very good, without the want of any thing that might conduce to his happineſs or perfection, which goodneſs continued in him after his Fall, though much clouded and veiled. Foraſmuch then as God hath been pleaſed to lay up in Man this great Treaſure, to the end he might make uſe of it for his good and perfection, we muſt conclude, that the Divine Wiſdom hath placed it ſo, that Man may always have recourſe to it, and take thereof, (without any hurt to his Body) to the glory of God, and his own good. For had God placed this Treaſure in the Fleſh or Blood of Man, he would have been obliged to hurt and weaken his Body by cutting a piece of his own Fleſh, or letting out his Blood, in order to prepare this great Medicin, which by this means would prove too dear, ſo that moſt Seekers would rather want the Medicin, than attain it this way. But God, who is the Eternal Wiſdom it ſelf, hath not been guilty of any ſuch overſight in his Works, which are all perfect, and no fault to be found with them; and if Nature in any of her productions prove defective, that is not to be attributed to God, but to Satan, who whilſt Man ſlept ſowed the Tares amongſt the good Seed, which the Maſter of the Houſhold had ſowed in his Field.

If it be ſo then, that God hath not laid up this great Treaſure in the Fleſh or Blood of Man, we may further enquire, where then we are to look for it? Certain it is, that God, our Heavenly and Wiſe Father, hath laid up this great Treaſure in Man, where at all times, without any let, pains or trouble, he may come at it,

and have it for nothing, *viz.* in the Superfluities of Nature, as Urine, Dung, Hair, Sweat, and Spittle. I ſay that in theſe deſpicable Excrements and Superfluities of Nature, God hath laid up a great Portion for Man, which he by reaſon of his Pride, blindneſs and hardneſs of Heart, cannot ſee or perceive.

Another Queſtion that may be here demanded, is, In which of theſe Excrements this Treaſure is moſt copiouſly to be found? To which I anſwer, that it may be had from any of them, but in the one more plentifully than in the other, but which is the moſt fit and proper for this Work, I dare not plainly ſet down at preſent, for fear of expoſing and proſtituting this Pearl to the Wicked and Unworthy, which all honeſt Philoſophers have ſo highly forbidden. But this I will do, *viz.* moſt clearly demonſtrate, by many inſtances, that out of all the Natural Excrements and Superfluities, whether of four-footed Beaſts, Fiſhes, Creeping Things and all Vegetables, a Mineral Aurifying Virtue, that is the Matter of the Philoſophers Stone, may be had, and that without coſt and charges in all parts of the World, ſo that no body, how mean ſo ever he be, but may have enough of the matter for nothing, and needs not by his Poverty be deterred from undertaking this great Work, that affords Health and Riches to him that can bring it to an happy end.

I proceed now to thoſe Proofs and Experiments that evidently make out, that in all things (beſides Metals) a Mineral Virtue and Power is found, whereby the Philoſophers Stone may be prepared. I ſhall begin firſt with four-footed Beaſts, becauſe I do think it fitting for ſeveral weighty Reaſons, at this time to paſs by the Myſteries that lie hid in Man, that they may not be expoſed to the Wicked and Unworthy. Now theſe Excrements and Superfluities of four-footed Beaſts as well as of Man are different, according to their diverſe Paſſages and Places of Production, as Urine which makes its paſſage through the Bladder, Dung through the Guts, Sweat through the Pores of the Skin, Spittle through the Mouth, and the Hair or Wooll of Beaſts, alſo through their Skin or Hide, and accordingly are of different Virtues and Powers. Upon this account we muſt conclude, that in the Sweat of Men or Beaſts, there is not ſo great virtue as there is in Urine, the former being a ſuddain and almoſt inſtantaneous Generation, whereas the later requires ſome hours time before it can paſs through its ſeveral Chanels, and be made fit for Natures ſeparation. So likewiſe is Mans Dung a long while a paſſing through the Guts, which in Man and Beaſts are much longer than in Birds or Fiſhes, to the end that the Dung might be the better putrified and digeſted; Thus we find by Experience, that the Dung of a Stork which paſſeth only through one ſhort Gut, when it falls upon the Graſs doth preſently burn and ſcorch it, whereas the Dung of Men and Beaſts laid to the Roots of Vegetables, or any way conveyed to the ſame, do ſtrengthen and invigorate them, and are indeed the higheſt Medicin of Vegetables; as Country Farmers well know, who with the help of the Dung of Men and other Animals are uſed to cure their ſick, barren, and overwrought Fields, Vineyards and Orchards, reſtoring them to their former ſtrength and fertility. But though ſimple Ruſticks be very well acquainted with the great virtue and uſe of Dung, yet our great Learned Men cannot believe, that in ſuch a deſpicable Subject ſhould be lodged ſuch an Excellent Univerſal Medicin, capable to cure the Diſeaſes of Men and Metals; and the reaſon is, becauſe they love Pride and Idleneſs too well, will not put their hands to the work, contenting themſelves with what they know already, without ſearching into endleſs Secrets of Nature. For this cauſe it is, that true Medicin and Alchimy are advanced to no higher degree of Perfection. *Helmont* complains of this negligence in Phyſicians, who leave the preparation of their Medicins to Apothecaries, declaring, that every Phyſician who deſires to have good and rightly prepared Medicine muſt be both Maſter and Servant, that is, he muſt truſt the Preparing of his Remedies to none but himſelf.

The preſent Subject I am upon, *viz.* the Excrements of Men and Animals puts me in mind of a Story relating to *Paracelſus*, which take as follows.

A Relation of what happened at Vienna *between* Paracelſus *and ſome of the Imperial-Court Phyſicians.*

Paracelſus being on a time ſent for by the Emperor to *Vienna*, to cure ſome Perſons of high Quality, whom the Imperial Phyſicians could not help, having ſucceſsfully performed the Cures he was ſent for, went to take his Leave of the Phyſicians, who earneſtly intreated him to leave ſome of his noble Medicaments with them for a remembrance; whereupon *Paracelſus* anſwer'd, that he would fetch ſomething for them; The Phyſicians, ſuppoſing he intended to beſtow ſome part of his prepared Medicins upon them, with impatience expected his return, who ſoon after came to them, and ſet down on the Table before them a Silver Diſh cover'd with another Diſh. The Phyſicians were very deſirous to ſee what *Paracelſus* had brought for them; at laſt one of them taking off the Cover, found a great Turd in the Diſh, at which being exceedingly enraged, taking for granted that *Paracelſus* had done this to affront them, they all departed, and when ſome call'd them back, *Paracelſus* ſaid, Let the Aſſes go, they do not deſerve this great Secret, which I intended to communicate to them; And then added, He who doth not know what Mans Dung is, knows nothing, and Heaven and Earth are equally hid from him. With which words he ſufficiently intimated, that a great virtue is hid in Mans Dung. Thus much ſhall ſuffice, by way of Parentheſis, to have ſpoken concerning *Paracelſus* his Opinion concerning the Superfluities of Nature, and particularly the Excrements of Man, we proceed now to ſpeak of the Excrements of other Animals, and in particular of Sheeps Wooll.

An Experimental Demonſtration, that a Mineral Virtue is hid in the Hair of Beaſts.

℞. Of clean Sheeps Wooll iv Ounces, and pour upon it a like quantity of ſtrong *Aqua Fortis*, abſtract this *Aqua Fortis* wholly in Balneo, and the *Aqua Fortis* will diſſolve the Wooll, and when abſtracted, will leave behind a ſtinking Stone of a dark brown colour; afterwards diſſolve in another Glaſs Body of *Mercury* j Ounce, and of the fineſt *Sol* iij Ounces, pour theſe Solutions of *Sol* and *Mercury* into the Glaſs wherein the diſſolved Wool is, then abſtract the Menſtruum from the Metals, till nothing remain but a dry Stone in the bottom of the Glaſs, take this Stone and put it into a Glaſs Retort, and diſtill the *Mercury* from the *Sol* in a ſtrong heat. *N. B.* The *Mercury* will not come over quick, but in the form of a Butter of *Mercury*, of great uſe for the healing of incurable Venereal Ulcers. If you pour ſome Water upon the ſaid Butter, it will precipitate the *Mercury* in form of a white Powder, which being edulcorated and dried, is a good Purge in Venereal Diſtempers. But if you rectifie this Butter, and then pour it upon

upon a pure Calx of *Sol*, the Butter will diſſolve the *Sol*, and being afterwards digeſted for ſome time, the *Mercury* by means of the Saline Spirits of the Wool will be fixed with the *Sol* into a Stone, with it make a trial upon Metals, to ſee what it can do, and thou wilt find thy Labour richly rewarded; but if thou canſt not hit it, then think, that it is not the will of God thou ſhouldſt have it, and do not blame me, who have ſet down nothing but what I have performed my ſelf. Now let us ſee what courſe we muſt take to recover our *Sol*; break the Retort, and take what was left at the bottom of it, which thou wilt find black as a Coal, in which black matter thou muſt look for thy iij Ounces of *Sol*, foraſmuch as the Butter has carried but very little of the *Sol* over with it, which thou may'ſt ſeparate from the black matter, as follows.

Melt good *Nitre* in a ſtrong Crucible, and when it is in Flux, caſt into it one piece of your black Matter after another, and the *Nitre* will burn away the *Sulphur* contained in the ſaid Coals or black Matter, and the *Sol* melts down into a Body, pour forth the *Nitre* together with the Golden *Regulus* out of the Crucible into a Cone, and the *Sol* will ſettle at the bottom in form of a *Regulus*, which, when ſeparated from the *fæces*, appears ſnow-white and brittle, much reſembling a *Regulus* of *Antimony*; the *fæces* are of a red colour, and contain much good. This white *Sol* being expos'd upon the *Cupel* with *Saturn* to a fiery trial, a third part only of the *Sol* will be found remaining of the colour of good *Sol*, two parts being vapour'd away. The Queſtion is now, What that white colour was, which evaporated on the Teſt? If thou ſay'ſt, that the Coals of the Wool, with the help of the *Nitre*, have rob'd the *Sol* of its colour, thou art not altogether out of the way, nor wholly in the right. If thou ſay'ſt, that there is no Mineral Virtue in the Wool, but that the *Sol* became white by the addition of *Mercury*, thou art not wholly out of the way neither; but this is not to be underſtood of the Common *Mercury* added to the *Sol*, but of the *Mercury* contained in the Wool, which has joined it ſelf with the *Sol*; for Common *Mercury* cannot abide with *Sol* in a ſtrong melting Fire, but flies away, leaving the *Sol* alone, as is well known to Chymiſts. If thou ſay'ſt, that there is a Mercurial Virtue in the Wool, which within a few hours ſo changeth the Common *Mercury*, that it is able to abide a melting Fire with *Sol*, then it will follow, that by means of the *Salt* which is in Wool any Common *Mercury* may in a ſhort time be made capable of enduring not only a melting Fire, but the *Cupel* alſo. This I ſuppoſe is a plain and evident demonſtration, that there is a Mineral Virtue in Animals, and eſpecially in the Superfluities of Nature, which we will now proceed to demonſtrate with another Experiment. Now if the Superfluities of Animals are able to do this, have we not reaſon to conclude, that the right Superfluity of the Microcoſme will do the ſame much better?

Another Experiment to demonſtrate, that a Mineral Mercury *and* Sulphur *is contained in the Superfluities of Animals.*

℞. Of filed or raſped Horns of Sheep, Oxen, Goats and Deer, but Harts and Goats Horns are the beſt, and the Horns of Wild Goats, and the Tusks of Wild Swine yet better; and the Horns of Fiſhes, which are commonly called Unicorns Horns, and the Elephants Teeth are the beſt of all for this purpoſe; but where theſe cannot be had, the Experiment may be performed with Goats or Harts-Horn. Diſſolve ij Ounces or iij of either of theſe in a good *Aqua Fortis* which has been abſtracted from decrepitated *Salt*, into this Solution put j Ounce of *Sol*, abſtract in a Glaſs Body the *Aqua Fortis* from the Horn, in which abſtraction the *Sol* becomes diſſolved, and a brown Stone is left behind, which muſt be melted down in a cover'd and well luted Crucible with a blaſt, by which means the Horn will be turned into black *fæces*, and the *Sol* will fall white to the bottom, brittle as a *Regulus* of *Antimony*; from whence it follows, ſince this brittleneſs and whiteneſs of the *Sol* could not be cauſed by the *Aqua Fortis*, that the ſame muſt be attributed to the white *Mercury* and *Sulphur* drawn from the Horns. Whereby it clearly appears, that a Mineral force and virtue is hid in the Horns of Animals. What I have ſaid concerning the covering of the Crucible with another, and well luting them together, is not without reaſon, for if the Crucible ſhould be ſet open in the Fire, and continue there for ſome time, the *Sulphur* of the Horns would be kindled and conſumed, and the *Mercury* would be revivified and fly away, and the *Sol* would remain unalter'd. For it is to be noted, that the Mineral *Mercury* and the *Sulphur* of the Horns are very tender and volatile, and are ſoon loſt when the operation is not performed, as before hinted, in a cloſe luted Crucible. This Experiment may be done in like manner, with the Superfluities of Fiſhes, *viz.* their Skales, Teeth, and the Stones or Bones that are found in ſeveral of them, and the effect will be found the ſame as before mentioned.

The ſame may alſo be performed, with the Feathers and Egg-ſhells of tame and wild Fowl. *N. B.* Egg-ſhells are diſſolved with more eaſe than Feathers. ℞. The Egg-ſhells of Hens, Geeſe, or other Fowl, waſh them clean, taking out the inward skin or film, then dry them, and abſtract from them a Solution of ☉, and melt the remainder in a cloſe covered Crucible, and you will find the ſame effect, as before.

If you have a mind to make the ſame Tryal with Vegetables, then take *Tartar* which is fitter for this purpoſe, than either the Wine it ſelf, or the Wood of the Vine, inſtead of *Tartar* of Wine, you may take the *Tartar* that cleaves to the Veſſels, wherein the juice of Crabs hath been keep, or the juices of any other ſowr Fruit, or inſtead of *Tartar* we may take the Grounds of Wine, firſt dried. ℞. Any one of theſe, and abſtract from it a Solution of ☉, melt the remainder as before in a cloſe luted Crucible, and the ☉ will be found white and brittle, like to a *Regulus* of ♂ at the bottom.

From theſe Experiments it appears, as clear as the day, that a Mineral Virtue is hid in all things: Yet for more abundant Confirmation of this Truth I ſhall add ſome further Inſtances. The ſame proof may be done with dry or moiſt Herbs, or Wood, proceeding in the ſame manner as before hath been taught, with Wool, and we ſhall find the ſame effect. In particular, all ſort of Corn, Rye, Wheat, *&c.* afford a very good Tincture, they muſt be diſſolved, and proceeded with as before mentioned, concerning the ſuperfluities of Animals. If therefore Mineral Powers may be found in all Vegetables and Animals, on which Man feeds, and hath his growth and Suſtenance, how can it be denied, but that the ſame Power muſt needs be in Man alſo? Wherefore it is beyond all doubt, that every Man carries the matter of the Philoſophers-Stone (tho' raw and unprepared) about with him.

To make this Truth to appear, with fuller and clearer Evidence, I am minded to give the ignorant a ſenſible Demonſtration, that (without mentioning the

righ

right Subject of the Philosophers-stone) an universal Medicine for Men and Metals, may be had alone from the despicable and abominable Subject of Mans-dung.

℞. Six, eight or ten ℔ of some healthy Mans-dung, (it must be gathered without any mixture of Urin) and put it into a Glass-body, and pour upon it about the same quantity of rectified Spirit of Wine, stir them with a stick together, set the Glass, with a head fitted to it in *Balneo*, and abstract the Spirit of Wine, which has extracted the Mineral ♃ and ☿ that was in the Dung, and brings it over the Helm: Which stincking Spirit of Wine must be burnt away under a large Refrigeratory Helm, by which means the stincking ♃ of the Dung is consumed in the Flames of the Spirit of Wine, and the incombustible Mercurial *Salt* mounts up in the Flames to the top of the Helm, where it is caught, and is a great Jewel in Physick and Alchimy. If we have a mind rather to have our Celestial *Salt* in a dry Form, then we must abstract the Phlegm from it: Tho' if we intend it for a Medicinal, it is better not to abstract the Phlegm (which is not wholly without some Virtue) but use them together. But if our intent be to make use of this incombustible Mercurial *Salt*, in order to *Metallick* Transmutation, then we must separate its Moisture, and mix the said Microcosmical *Salt* with ☉, and maturate the same to a *Metalline* Tincture. In a Liquid Form, the said Celestial *Salt* is an excellent Medicine for sick and weak People, as having great Sympathy with the Vital Spirit of Man, wonderfully strengthening the same, and in all Diseases performs whatsoever can be expected from an Universal Medicine; and is not in the least loathsome, being purged from all Stinck and ill Taste, by the Flames of the Spirit of Wine.

This *Aqua Vitæ* of the Philosophers performs also very wonderful things in the Vegetable Kingdom, for if the Seeds of any Herb be steeped for an hour in the same, and then laid upon a Trencher, or any board at some distance from one another, and covered over a Fingers breadth with Earth or Sand, being then exposed to the warm Sun, the Seeds immediately will begin to shoot and grow, even visibly to the Eye, which is very pleasant and curious. But those Seeds which are soft, are more proper for their speedy growth, than those that are hard: The Seeds of Parsley, Cresses, Fennel and Annis, which abound with much Volatile *Salt*, are the best for this Purpose. So that we see, that this Medicine prepared of Mans-dung is truly Universal, as curing the Diseases of all the three Kingdoms, *viz.* of Animals, Vegetables and Minerals. Wherefore if any one can find in his heart, to work upon this loathsome Subject, he will need no other, for that all lies hid in it, which gave one of the Ancients occasion to say,

Laudat Præsentem quælibet Herba Deum.

Each Herb from Earth its head doth raise,
Its present glorious God to praise.

I cannot, but repeat this great Truth once more, that the highest Medicine in the World is most commonly to be found in the most despicable Subjects, God having ordered it so, for to make known his Almighty Power; and that he regards the Welfare of the Poor, as well as of the Rich, willing that all should be helped and relieved, who do not by their own Pride, Laziness and Wickedness withstand so great Love and Mercy. Had Gods Will been to communicate this Treasure only to the Proud, Rich and Covetous, he would have laid up the same in ☉ and precious Stones, which the Poor cannot go to the Price of, but behold we find to the contrary, that God hath been pleased to hide this Treasure in such despicable and loathsome Subjects, as the Rich do scorn to meddle with, by which means a Door is opened to the Poor, to obtain that which, they reject and despise.

But to return to our Subject, and yet further to Evidence, that a *Metallick* Virtue is hid in Mans dung, (tho' it be not the true Subject, which the Philosophers point at in Man) and that much good may be done with it, as containing a very glorious ♃ and ☿; I will add this Experiment, lay a Piece of Silver into a Chamber-Pot, wherein is Dung and Urine, let it lye there for some time, and the ☽ will attract the ♃ or Animal Gold, that is in the Dung and Urine, and become colour'd like ☉, which is a sufficient Demonstration, that the matter of the Stone is hid in those Subjects. And forasmuch as it is notorious, that ♃ is the Agent and ☿ the Patient: And that the ♃ alone tingeth, and that ☿ is only tinged: Wherefore it behoves us to fix the ♃, whereby it is fitted to tinge the ☿, bind and fix it: Which to bring about, much searching has been in the World, and still is, tho' for the most part all in vain, very few Seekers going the right way, and therefore mist of their End, tho' in their Search they have found many Arts, some good and others as bad. So we read, that one *Bartholdus Schwartz* a Benedictin Fryar having found in an old Book, that ♃, the Father of Tincture, may be fixed with *Saltpetre*, was resolved to make a Tryal of it, but to no purpose, for the ♃ and *Nitre* being kindled by the Fire, broke his Vessels, Furnace and all to pieces, whence he took occasion to consider further of the Matter, and invented that mischievous thing called Gun-powder, tho' he fail'd of his fixing of ♃: The Ancient Philosophers, many Ages ago, were not ignorant of that Composition, but would not Communicate the same for Fear of the abuse thereof: And called it a *Basilisk*, because it kills all things it looks upon. Others have set forth *Nitre* and ♃ under the Notion of a watchful, never sleeping, and Fire-spitting Dragon, that guarded the Golden *Fleece*, which *Jason* by *Medeas* direction and Counsel cast into a deep Sleep, and so took away the Golden *Fleece*. *Medea* signifies diligent Study and Meditation, *Jason* the Artist, or Laborator, the Soporiferous Medicine given to the Dragon, the due Fixation of the Matter. Another Benedictin Fryar, *Basil Valentine*, had better Success in fixing ♃ with the help of *Nitre*, which Fixation he hath recorded in his Writings, where he makes *Saltpetre* to speak thus: ♃ *is my best Friend, and withal my greatest Enemy, but when we are duely conjoyned, and made our Marriage Bed in Hell, after we have well sweat together, we cast off all our Impurities, for to beget Children of Wealth and Riches; and in our dead Bodies is found the greatest Treasure, which we bequeath by our last Will.* These are the Words of *Basil Valentine*, wherein he exactly and plainly describes the true Fixation of ♃, save only that he hath not named the Medicine wherewith the watchful Dragon is to be cast into a dead Sleep, and that for good Reason, because the whole Art and Master piece of fixing ♃ with *Nitre* consists therein. And *Paracelsus* writing concerning ♃ saith: *Here with few words many may be helped, were it not against God, for God wills not that all should be Rich, and therefore doth not give the Goat as long a Tail, as to a Cow, for fear he should out of Pride beat out his own Eyes therewith: For when a poor Man grows Rich, it commonly makes him Proud, and as sharp as a Razor to others.*

These

These are the Words of *Paracelsus*, wherein he declares a great Truth, for God will not have all Men to be Rich, because of the great abuse of Riches, which is too too common in the World. But to those, who are dead to the World, and look upon Riches, Money and Goods, as Dust and Smoak, and are Enemies to all sin and wickedness, to these God gives more than themselves desire or wish for, because he knows they will not abuse his Gifts. And so much shall suffice at this time, for my design is not at present to treat of the Fixation of ☥, which I have elsewhere done at large, but only to prove and make out, that the Matter of the Philosophers-Stone is to be found in all things in the World, which I think I have done already. Will any make a Tryal, and undertake the Work, 'tis free for him so to do, I have in this Discourse pointed out the right way, tho' I have not revealed the right Matter: But if what I have here set down be well considered of, by the ingenious Seeker, it cannot be long hid from him: Farewel.

A Corollary: Or, Appendix to the foregoing Discourse.

I Have in this short Treatise abundantly shewed and verified, that in all Vegetables and Animals, a mineral Virtue lies hid, which is able to Coagulate ☿ in Conjunction with ☉, into a Metal: And that I may be further helpful to the Lovers of Art, I intend here to deliver the whole manner, and Process of fixing ☿, by Excrements and natural Superfluities, to the end that every one, who reads and considers of it, may with ease attain to a true Tincture. In order to which, I am first to put the Reader in mind, what I have already hinted, that as these Superfluities of Nature, are different and various, so some of them are better for the fixing of ☿ than others: The best of all being, that which *Adam* brought out of Paradise, as a Childs Portion God had bestowed upon him, which I dare not name openly, but shall only set down here, how this Fixation of ☿ may be performed by means of the Superfluities of Animals.

I have, in the foregoing Discourse, declared the manner of Coagulating ☿ with the Wool, or Hair of Animals, so as to suffer himself to be fluxed with ☉ in a strong Fire, without evaporating, only to shew the possibility of it. But now shall set down, how the said Fixation may with Profit be performed, by means of an Animal *Salt Armoniack*. For certain it is, that in Man and all Animals, such a Secret *Sal Armoniack* is to be found, especially in Urine, Hair, Claws, Horns, Skins, *&c.* as also in the Blood, sweat and spittle of Man, which is of force to coagulate and fix *Mercury*.

N. B. The fasting Spittle of Man Coagulates running ☿, being stirred about with a Pestle in a Glass, or Stone Mortar, and so is made fit with Hogs-grease to be made into a Salve. Now after that common ☿ is thus Coagulated with fasting Spittle, if we mix it with Oyl or Butter, to make a Salve of it, we shall find that the ☿ will not unite with the same, but runs together, and becomes quick as before, and only suffers it self to be joyned with melted Hogs-grease, but with the fat of no other Animal whatsoever; the Reason without doubt is, because Swine have a great affinity with Man and Metals. Thus we find, that Mans and Swines Blood have this Property, that if the *Calx* of ♄ be for some time boyled in either of them, the ♄ becomes white and hard like ☽; the Reason of which the Reader may be pleased further to enquire into. Mans Urine also has this Nature and Property, that at one only Sublimation it so Coagulates ☿, that when ♀ is rubbed over with it, it looks as well as if it were Silvered over. And the sweat of Man is partaker of the same Property, of Coagulating and Metallizing ☿, so likewise the Excrements of Man and Beasts, *&c.* But nothing does it more readily than Mans fasting Spittle, wherefore also *Albertus Magnus* saith, that the highest Mineral Power hath its Seat in the Head of Man, and especially between his Teeth, he himself having found, oblong Grains of ☉, between the Teeth of a dead Mans Skull; 'tis very probable, that the Person, to whom the same belonged, had taken ☿ inwardly, which naturally tending to the Mouth and Teeth, had been fixed there by the Mineral Virtue of the Microcosm into good ☉. Now if we see this happen thus in the Body of Man, what reason have we to doubt, but that the same Mineral Virtue may, without the Body of Man, not only fix ☿ into good ☉, but also reduce it to a true and perfect Tincture. Forasmuch then, as this is not only possible, but certain and unquestionable, I having wrought it with mine own hands, and knowing many other easie ways, by means of the natural Superfluities of Animals, to Coagulate and fix ☿, I am the rather inclined to Communicate the same to the World.

I will therefore in the name of God, for the good of Mankind, Communicate the way and Process. I my self at first made use of to Coagulate ☿, and that entirely from the Beginning to the End, and very plainly, not concealing any the least manual Operations. If any one from this Process here set down, chances to find out a nearer and better way, I shall be glad of it, we know it is much easier, to correct and meliorate a thing already invented, than to invent it. What I here set down my own hands have wrought, what I have never done or tryed I cannot write, but leave it to those, who are further advanced herein than my self.

A PROCESS.

TO fix ☿, by means of natural Superfluities into a true Tincture. ℞. Eight Ounces of Wool, Goats hair, filed Goats or Harts-horn, *&c.* dissolve any of these in a strong *Aqua Fortis*, at the same time dissolve, in an *Aqua Fortis*, that has been abstracted from decrepitated *Salt*, an Ounce of fine ☉, and two Ounces of ☿ in common *Aqua Fortis*, pour all these three Solutions together into a Glass Body, and abstract all the *Aqua Fortis* from the ☉ and ☿; this abstracted stincking Water pour again upon that, which remains in the Glass, and distil it off, repeat this Cohobation six or seven times, and the ☿ by this means will become united, and joyned to the ☉. This Conjunction put into a Glass Retort, and with a strong Fire drive the ☿ from the ☉, which will come over in the form of a thick red Butter, for the ☿ being so far fixed with the ☉, will not without great force be separated from it, especially when the Operator hath made use of a strong fixing Water, or *Menstruum*: However, by the violence of the Fire, he is at length forced to quit the ☉,

in which Separation he carries the Soul of ☉ over with him, which makes the *Mercurial* Butter to be of a red Colour; which *Mercurial* Butter, or Water being rectified doth dissolve ☉, and with it may be fixed into a true Tincture.

N. B. This *Solar* Butter may be another way without ☉ be fixed into a Tincture, not necessary to be set down here. He that hath a List to the work may begin with the Fixation, that is performed with the help of ☉. The ☉ and ☿ that remains in the Retort, may be recovered, as follows hereafter; for certain it is, that much of the ☿ in this Operation continues with the ☉, the Violence of the Fire having been unable to separate it, tho' it may indeed be done another way, whereby we are experimentally assured, that Animals have power so to bind the winged Youngster, as to fix him with ☉ into perfect Tincture, which Fixation would be easie, if the Horns and Hair of Animals did not for the most part turn to Coals, which do much hinder Fixation: For when the *Solar* Butter is by the force of Fire driven from the ☉, the Coals of the Hair stay behind with the Fire of ☉ and ☿: Which Coals may either, like other Coals, by means of our wonderful *Salt* be fixed into Tincture, for the ☉ and half fixed ☿ do not hinder, but rather further and help Fixation: Or else, we may joyn to these Coals, a due Proportion of good *Nitre*, and so make of them the always watchful, and Fire-spitting Dragon, and with the help of the *Narcotick* ♆ of ♂ and ♀ cast him into a dead Sleep, kill and fix him into Tincture. For we must know, that this Animal ♆ is incomparably better, than any Mineral or Vegetable ♆ of Stone, or Wood-Coal. Or else with the help of a fulminating Powder, we may separate the half fixt ☿, from the half disanimated ☉, by which means the *Nitre* kindles the Animal ♆ and consumes it, and then the ☿ being freed from the Bands of ♆ must come over, carrying over with it the yet remaining Soul or Tincture of ☉, which the ☿ in the Preparation of the *Solar* Butter did not bring over: Thus the ☉ becomes more disanimated, and the ☿ (which comes over of a fair Purple Colour) becomes the more richly animated, which Purple coloured ☿ impregnate with the Soul of ☉, may either by it self, be fixed into Tincture, or we may extract the Tincture with the Spirit of Wine, and make use of it as an inestimable Treasure in Physick. But the best way is, with our wonderful *Salt*, to fix these Animal Coals impregnate with ☉ and ☿ like other Wood-Coals into a tinging Carbuncle.

N. B. This wonderful *Salt* must be prepared of Oyl of *Vitriol* and *Nitre*. This is the way I have followed to Coagulate ☿ with ☉, by means of Animal Superfluities. I must own that it is a troublesome Work, especially because of the Stincks, one is obliged to take in. Some Philosophers indeed make mention of a nearer and easier way to obtain an Universal Medicine from Animals: Wherefore he that doth not like the Process, may seek for a better, which if he chanceth to light on, he has reason to bless God therefore, whose Gift alone it is.

A PROCESS, To Sublime the Coals of Sol, Mercury *and Animal* Sulphur *into Purple coloured Flowers, with the help of a fulminating Powder.*

SET a well luted Glass, or earthen Body in a subliming Furnace till it be red hot, then cast in so much *Nitre* as you think will be sufficient to kindle thy Coals with, and consume them, to which purpose, thou mayst put three times as much *Nitre*, as the quantity of thy Coals is. When thou seest that the *Nitre* is red hot and in Flux, then cast in upon the *Nitre* a piece of thy Coals as big as a Hasel Nut, and the *Nitre* will immediately kindle the ♆ and consume it, and by this means set the ☿ free; for in the burning away of the ♆, the ☿ is forced to leave the ☉, as not being able to endure so strong a Fulmination: And having by means of the Animal ♆, so intimately united with the ☉, as to be very hardly separable, but yet by the force of the *Fulmen* being fain to leave it, he in he in his flight takes the Heart of ☉ along with him, and brings it over in the form of a purple Sublimate, which with the Oyl of *Vitriol* (but much better by means of the universal Coagulator) may easily be fixed into a Tincture. This throwing of the Animal Coals upon the *Nitre*, thou must continue till all thy Coals be consumed, and so thou wilt obtain a ☿ impregnate, and tinged with the Soul of ☉, and the ☉ remains of a white Colour, being disanimated by the *Nitre*.

N. B. As oft as you cast a piece of your Coals into the Vessel where the *Nitre* in Flux is, you must immediately clap on the Head again, that the ☿ may not fly away, but be caught therein. For the said ☿ is a great Treasure, and may easily be fixed into a fusible Tincture. Thus you have the whole Process, how by means of Animal superfluities I have handled ☿ with ☉, and what hath been the Success of it: He who shall venture to set upon this Work and finish it, will find much more than I durst set down here.

The nearest and easiest way to fix these *Solar*, *Mercurial* Animal Coals into a Tincture, according to my Judgment is, First to fix the said Coals, by means of a Fixative *Sal Mirabile*: Or else, to mix them with a Volatilizing *Sal Mirabile*, and by Retort distil from them a good graduating Water; we may also add to these Animal Coals such a Fixative water, as is employed to kill and fix the watchful Dragon or *Basilisk*. Every one may choose of these several ways, what pleaseth best: And if any thing by reason of the shortness of time hath been omitted here, the same will be discovered to the Laborator in his Work, if God does not hinder it, whose Blessing is all in all. *Thomas Aquinas* had the Art in twenty four hours time, to prepare an universal Medicine from natural Superfluities alone, without any Addition of ☉ or ☿, without Charges, Labour or Trouble, without breaking of Glasses, and without taking in any loathsome Smells. So likewise *Avicenna*, *Albertus Magnus*, *Rhasis*, *Petrus Bonus*, *Joannes Lancinius Rupescissa*, had a much nearer and shorter way, than here we have described, as appears abundantly by their Writings. These Authors took their Subject and putrified it in Horse-dung, and then with the Element of Fire, they fixed the ☿ with the ☉ into a Tincture, in which Labour they were much troubled with the loathsome smell of the Matter. *Morienus* tells us, that the Matter when in Putrefaction, sends forth a stinck like to that which proceeds from Graves, for indeed there is nothing in Man, which doth not stink extreamly, when brought to Solution or Putrefaction. When we dissolve these Animal Matters with Oyl of *Vitriol*, this stink is not so great, as when they are dissolved with *Aqua Fortis*, the same also may be said of Spirit of *Salt*, when ☉, ☿ and Wool are dissolved in the same, and besides doth more Volatilize the ☉ in order to Sublimation, or Fulmination than *Aqua Fortis* doth. If

instead

instead of the Common ☿ we take a ☿ of ♄ for this Work, it will in Fulmination carry more of the Tincture of ☉ over, and the purple Flowers proceeding thence, are much more readily fixed by the universal Coagulator, than those that are made with the Common ☿.

What this universal Coagulator is, I have elsewhere declared, the great use of it is very evident, in that volatile Tinctures can hardly be fixed without it: For this Coagulator makes all volatile Corrosive *Metalline* Spirits fix so as to be able to endure the Fire, which without it require a long time. And therefore, he who doth not know it, or the use of it, must needs find the fixing of volatile Spirits very tedious and troublesome, whereas those that know the use of it, may perform more as to the fixing of Tinctures in three days time, than others without it can do in a whole Year. For there is nothing in Nature so Volatile, which this Coagulator doth not fix, as *Turba* testifies, saying that if God had not created our *Sal Armoniack*, all Chymical Labour would be in vain. Which indeed is the very Truth: For without a good *Sal Armoniack* it is impossible to extract the Tinctures from Metals and Stones, or to purifie and subtilize them to the highest Degree; and without preceeding Subtilizing, there can be no ingress into compact Bodies: For the more that any Tincture is Subtiliz'd and Volatiliz'd, the more readily, after Fixation, doth it enter all hard and compact Bodies. Wherefore if God had not created this Coagulator, these volatile Tinctures, how high soever they might be in Colour, would be of no use for the Transmutation of Metals. Thus we find, that in *Alchimy* these two principal Keys are extremely necessary: The first opens, makes Volatile, and Purifies and gives Ingress; the other binds and fixeth the Volatile, so as to make it endure the Fire, without which Fixation all Volatilization is in vain. O the Pains that I have formerly taken for to fix ☿, ☉, ♃ and other such like Volatile Metalline Spirits, whereas now it is most easie for me to do all this, and much more, with the help of my universal Coagulator, the knowledge and discovery of which must be fetched from the Principal Agent, or secret Fire of the Wise Men.

I cannot upon this occasion pass by discovering another Property that is found in our Animal Subject, *viz.* that it can in one distillation resolve all Metals, none excepted, into a running *Mercury*, which is a thing very wonderful, that fixt Gold and Silver should be so easily reducible to Volatile *Mercury*, seeing their Bodies are by nature kept in such strong bands. Of which Reduction of Metals to quick *Mercury*, no Person hath writ more clearly than *Basil Valentine*. The Ancient Philosophers have indeed writ much concerning the volatilizing of fixt Metals, but did never declare, that, by this Volatilization, they understood a reduction of them to running *Mercury*, for which reason this Art also hath been so little known. The Ancient Philosophers have recommended this volatilizing and fixing of Metals to us in these following Verses.

Fixum si solvas, faciasque volare solutum,
Et volucrem figas, faciet te vivere tutum.

Dissolve the fixt, and make it then to fly,
And fix the Fledge, and thou shalt dwell on high.

With these few words the Philosophers have declared their whole Work, but without any further explaining of them; so that the manner of compendiously volatilizing and fixing of Metals has been left in the dark. But because the end of this wicked World draws nigh, God is pleased to reveal these Secrets to some of his Chosen, which Talent mercifully bestowed upon me, that I might not be guilty of concealing, I have in the Seventh Part of my *Prosperity of Germany* at large set down the way to Meliorate the meaner Metals, with the help of Animal Salt Spirits, and that so plainly, that every one may understand it, and the Poor (if they will put their hands to the Work) may have abundantly wherewith to maintain themselves.

Moreover these Superfluities of Nature are endued with this power and property, that in one days time they can destroy fixt Gold, that resists all the Elements, so as to be no more *Sol*, but will suffer it self to be melted into a green fusible Stone, which is of wonderful force and virtue in all Metallick Operations, of which it is not needful to speak more at present. If God thinks fit to bestow this Green Stone upon thee, he will not suffer thee to be ignorant what use may be made of it. I cannot, upon this occasion, but communicate something that is very wonderful. As I was on a time melting some of this Green Stone in a Crucible, it happened to run through the Crucible into the Furnace, where some Silver was run out a little before, with which the Green Lion joyn'd himself; and when I came by fusion to separate my *Luna* from the Green *Sol* Stone, or my destroyed *Sol*. I found that my Green Stone had never been throughly united with my *Luna*, the Stone continuing still green without any the least alteration, but my *Luna* was become black and brittle like *Antimony*, and went away upon the *Cupel*. Now, what more wonderful change can be imagin'd than to see white fixt *Luna* changed into black volatile Lead? Upon occasion of this wonderful Transmutation one of the Philosophers cries out, as struck with admiration; *Nunquid Natura Retrograda?* What is Nature then turn'd Retrograde? Mind well this point, consider of it, and you will discover wonders; for when *Sol* is so far destroyed as to be no longer *Sol*, then the greatest wonders may be accomplish'd by it. Yet know, that it is no easie matter so to destroy *Sol*, that it shall be *Sol* no more; the Ancient Philosophers unanimously declaring, than it is easier to make Gold, than to destroy it.

N. B. This Green Gold-Stone being kept for some time in the Fire, becomes changed to a red colour, which is also of great use, he who desires to know more of it, may seek for it, as my self and others have been fain to do.

N. B. The *Salt* of the greater World (I mean Common *Salt*) changeth the Metals that lie in it for a long time, into a hard Stone, as appears from this instance; Some Fishermen here in *Holland*, lately took up from the bottom of the Sea some Blocks of *English* Tin, whose outside was turn'd to perfect Stone, the inmost part of them still remaining Tin; Who knows, how many hundred years this Tin had lain at the bottom of the Sea, before this change was made; but if the Sea *Salt* of the greater World can perform this in a long time, the Sea *Salt* of the lesser World can destroy Metals in a very short time, for our Animal *Salt* can do more in a few hours time, than the Sea *Salt* of the Macrocosme can do in an 100 years.

Wherefore I recommend to the Lovers of this Art to study the nature of *Salts* and their use, if they intend to perform any thing Extraordinary either in Physick or Alchimy.

N. B. The

N. B. The *Salt* of the Microcoſme hath alſo this property, that when it is put into *Aqua Fortis* it not only diſſolves *Sol* but *Luna* alſo, and is an excellent way to extract the Gold and Silver that is in Sand and Stones, concerning which Extraction I treat at large in the Seventh Part of the *Proſperity of Germany*.

N. B. Another virtue of this Microcoſmical *Salt* is, that it extracts the Tincture of Gold, and leaves the Body thereof white. And if we afterwards take this impregnate *Salt*, and extract the Tincture of Gold from it with Spirit of Wine, and burn away the ſaid Spirit under a Refrigeratory Helm or Head, then the Celeſtial Salt, or the Water of Life of the Philoſophers, will be conveyed into the Glaſs Receivers, and is very ſweet and pleaſant, but withal ſo ſubtil and volatile, that the Air attracts and ſnatcheth it away, if it be not immediately pour'd out of the recipients, and carefully kept in a cloſe ſtopt Glaſs.

N. B. At the bottom of the Cup or Diſh wherein the Spirit of Wine, impregnate with the Tincture of Gold, hath been kindled and burnt away, you will find the Tincture of Gold in the form of a Blood-red, pleaſant, fragrant, Aromatical Oil, which is true living *Sol*, and never ſtands ſtill, but is in continual motion, perpetually changing from one form to another. In a word, it is the true living *Sol* of the Philoſophers, which by Art is made of Common Gold, that is dead, which Living Philoſophick Gold, fragrant Dragons Blood, Incombuſtible Oil, and true Potable Gold is without doubt the higheſt Medicin that is in the World.

N. B. In the foreſaid manner we may alſo extract the Tinctures from *Mars* and *Venus*, as alſo from *Antimony* and *Sulphur*, and with the aſſiſtance of the flame of Spirit of Wine maturate them into moſt lovely, fragrant, incombuſtible Tinctures. For by means of our Microcoſmical *Salt* all Metals and Minerals may be reduc'd to Potability, without the help of any Corroſive, in which ſtate they are the moſt powerful Medicaments imaginable, to which the very beſt Remedies of the Galeniſts are not in the leaſt to be compared. But no Man ever attained theſe Secrets that was afraid to ſmut his Hands with Coals, or that was not earneſt in his Prayers to God for the diſcovery of theſe wonders; their Silk Clothes, Velvet Coats, Artificial Cant, and vain Ariſtotelical Philoſophy, cannot produce any ſuch effects, but the Fire alone which is the effecter and diſplayer of Wonders. Wherefore no Man can come to be a true Philoſopher ſave only by Fire, which alone hath the power to remove that which is evil, and to manifeſt and bring to light the inward concealed Good, which is true in an Earthly as well as Heavenly ſenſe. I repeat it once more, that he, who doth not know Fire, and its hidden Divine Virtue and Operation, is a pitiful Philoſopher, and doth not at all deſerve that Title, for the Light is hid from him, and conſequently all Nature appears vail'd and dark to him; which matter I have treated of at large in my *Celeſtial and Terreſtrial Purgatory*.

Beſides all that hath been ſaid already, many other great, yea incredible, things may be performed with the help of Animal Excrements and Superfluities, and in particular the extraction of Silver and Gold out of Sand, Stone and Poor Oar, that is not worth the melting, as ſhall be at large declared in the Seventh Part of my *Proſperity of Germany*.

It may be ſaid with truth, that never yet did any Man find out all the Virtues that are contained in theſe Superfluities of Nature, they being indeed greater than can be believed, which is the reaſon, why the Philoſophers would never call theſe contemptible and loathſom Subjects by their own names, but have covered and concealed them under Metaphors and Allegories, that the great ſecrets contained in them might not be proſtituted to the Proud unworthy World.

I do intend, God willing, with the firſt occaſion to treat more at large concerning the nature and uſe of theſe Animal Superfluities in the Seventh Part of the *Proſperity of Germany*, where I ſhall, amongſt other things, demonſtrate, that theſe Superfluities of Nature are not only able to exalt *Sol* and *Luna* in their colours, but alſo to augment them to infinity in quantity and quality; I ſhall alſo plainly diſcover the way, how from Sand and Stone and the meaneſt of Metals, Gold and Silver may be extracted, ſo that every one, that is but little acquainted with the managing of Fire, may, with little charges in his own Houſe, entertain and keep going a profitable and rich Mine of Gold and Silver, for the comfortable ſupport of himſelf and family, to which God be pleaſed to grant his Grace and Bleſſing, *Amen*.

FINIS.

THE INDEX.

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